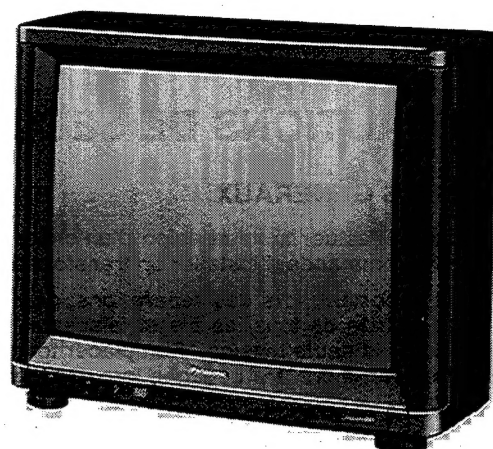


# Manuel de Service

Téléviseur couleur

TC-24A1F / 28A1F

Châssis ALPHA-2W



## Caractéristiques

Alimentation : AC 220 V, 50 Hz  
Consommation : Consommation horaire en courant alternatif : 89 Wh  
Impédance d'antenne : 75  $\Omega$  asymétrique sur prise coaxiale  
Système de réception : SECAM (L L'), (B G)  
PAL (I), (B G)  
Canaux de réception :  
VHF ch. E2 - E12 (SECAM / PAL B G)  
ch. 2 - 10 (SECAM L L')  
UHF ch. E21 - E69 (SECAM / PAL B G)  
ch. 21 - 69 (SECAM L, PAL I)  
CATV ch. B - Q  
Fréquence  
Intermédiaire : Vidéo 32,7 MHz  
Son 39,2 MHz  
Couleur 35,07 MHz  
37,106 MHz  
Les bornes vidéo / audio :  
AV1 / Entrée 21 broches Vidéo 1 V c-à-c 75  $\Omega$   
Audio 0,67 V rms 10 k $\Omega$   
AV1 / Sortie 21 broches Vidéo 1 V c-à-c 75  $\Omega$   
Audio 0,67 V rms 10 k $\Omega$   
(100% modulation)  
AV2 / Entrée 21 broches Vidéo 1 V c-à-c 75  $\Omega$   
S-Vidéo Y : 1,0 V c-à-c 75  $\Omega$   
C : 0,3 V c-à-c 75  $\Omega$   
Audio 0,67 V rms 10 k $\Omega$   
AV2 / Sortie 21 broches Vidéo 1 V c-à-c 75  $\Omega$   
Audio 0,67 V rms 10 k $\Omega$   
(100% modulation)  
AV3 / Entrée Vidéo 1 V c-à-c 75  $\Omega$   
Audio 0,67 V rms 10 k $\Omega$

Tension d'anode : 28,0 ( +1,0, -1,5 ) kV  
Tube Image : A59EAK22X01 ( TC-24A1F ) 63 cm  
A66EAK22X01 ( TC-28A1F ) 70 cm  
mesure diagonale, 110° de déviation

Sortie audio :  
Haut-parleur intérieur :  
2 x 10 W Impédance 8  $\Omega$   
( Taux de distorsion musical 10 % )  
Haut-parleur extérieur :  
2 x 20 W Impédance 4 - 8  $\Omega$   
( Taux de distorsion musical 10 % )  
Casque d'écoute : Impédance 8  $\Omega$   
Enceinte  
acoustique : 2 haut-parleurs à 2 voies, G / D

	TC-24A1F	TC-28A1F
Dimensions :		
Hauteur :	522 mm	572 mm
Largeur :	628 mm	686 mm
Profondeur :	460 mm	489 mm
Poids (NET) :	33 kg	39 kg

Accessoires  
fournis : Télécommande x 1  
UM4 Piles x 2

Les caractéristiques techniques sont susceptibles de modification sans Préavis. Le poids et les dimensions indiqués sont approximatifs.

# Panasonic

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## PRECAUTIONS DE SECURITE

### CONSEILS GÉNÉRAUX

1. Avant d'effectuer toute révision d'un châssis sous tension, il est recommandé d'installer un transformateur d'isolation.
2. Il est important, lors des réparations, de conserver la position initiale de tous les fils et faisceaux, surtout dans le circuit de la haute tension. Remplacer toutes les pièces affectées par la chaleur dégagée lors d'un court-circuit.
3. Après les réparations, s'assurer que toutes les pièces protectrices telles que barrières ou papiers isolants, blindages et réseaux d'isolation R-C soient convenablement placées.
4. Il est préférable de débrancher le fil d'alimentation si la télé-couleur ne doit pas être utilisée pendant un certain temps.
5. Une tension élevée, de l'ordre de 28,0 kV, est présente en plusieurs endroits lorsque l'appareil est en circuit. Il y a danger de chocs électriques lorsque le contact est établi en absence du panneau arrière. Toute personne qui tente de réparer cet appareil doit d'abord être consciente des précautions à observer avant de travailler sur un circuit à haute tension. Toujours décharger l'anode du tube cathodique au châssis avant de le manipuler.
6. Après toute réparation, on doit effectuer les tests de courant de fuite suivants dans le but d'éviter tout choc électrique.

### VÉRIFICATION DES COURANTS DE FUITE SANS ALIMENTATION

1. Débrancher le fil d'alimentation et installer un fil STRAP entre les deux broches de la fiche.
2. Placer l'interrupteur comme pour établir le contact sur l'appareil.
3. Mesurer la résistance entre les branches de la fiche d'alimentation et les pièces métalliques visibles telles que têtes de vis, antennes, arbre des commandes, support des poignées, etc. Certaines de ces pièces sont en contact avec le châssis et la résistance mesurée devrait se situer entre 4 M $\Omega$ , et 20 M $\Omega$ . La résistance des pièces qui ne sont pas en contact avec le châssis doit être infinie  $\infty$ .

### VÉRIFICATION A CHAUD DU COURANT DE FUITE

( Voir Fig. 1 )

1. Brancher le cordon secteur directement à une prise secteur. Ne pas utiliser de transformateur d'isolation pour cette vérification.
2. Raccorder une résistance de 2 k $\Omega$ , 10 W, en série avec une partie métallique exposée du récepteur et une terre comme une conduite d'eau.
3. Utiliser un voltmètre CA, de type à impédance élevée, pour mesurer le potentiel à travers la résistance.
4. Vérifier toutes les parties métalliques exposées et mesurer la tension à chaque point.
5. Retourner la fiche CA dans la prise secteur et répéter toutes les mesures ci-dessus.
6. Le potentiel à tous les points ne doit pas dépasser 1,4 volt RMS. Au cas où une mesure est supérieure à cette limite spécifiée, il y a un risque de décharge électrique et le récepteur doit être réparé et revérifié avant d'être rendu au client.

#### CIRCUIT DE VERIFICATION A CHAUD

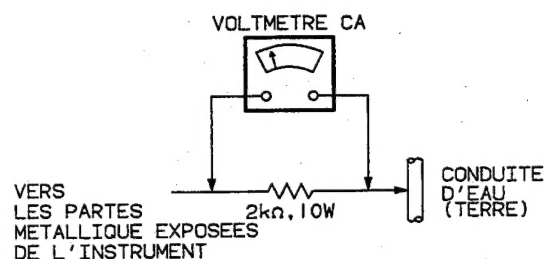


Fig. 1

## IRRADIATION AUX RAYONS X

### Attention :

1. Les parties de la haute tension et du tube - cathodique d'une télé - couleur sont des sources possible d'émissions de rayons X.
2. Si un tube cathodique témoin est utilisée pour le service, s'assurer que son assemblage pourra supporter 29,0 kV sans, émettre de radiations.

**Remarque :** Il est important que le multimètre à haute tension utilisé soit étalonné périodiquement.

1. Tourner entièrement vers la gauche la commande de lumière.
2. Placer le commutateur de service à la position "SERVICE".
3. Mesurer la haute tension à l'aide du multimètre approprié. La valeur nominale est de 28,0 ( +1,0 , -1,5 ) kV. Si la lecture est hors des tolérances, une réparation immédiate s'impose afin de prévenir toute panne prématurée.
4. Il est essentiel d'utiliser le tube cathodique d'origine pour prévenir toute émission de rayons X.

## ESSAI DU CIRCUIT DE FERMETURE

Cet essai doit être effectué comme vérification finale avant de rendre le téléviseur au client.

1. Recevoir une mire Philips.
2. Appliquer -40 V c.c. à TPE7 et vérifier que le circuit de fermeture ne fonctionne pas.
3. Appliquer -60 V c.c. à TPE7 et vérifier que le circuit de fermeture fonctionne.

## EMPLACEMENT DES COMMANDES

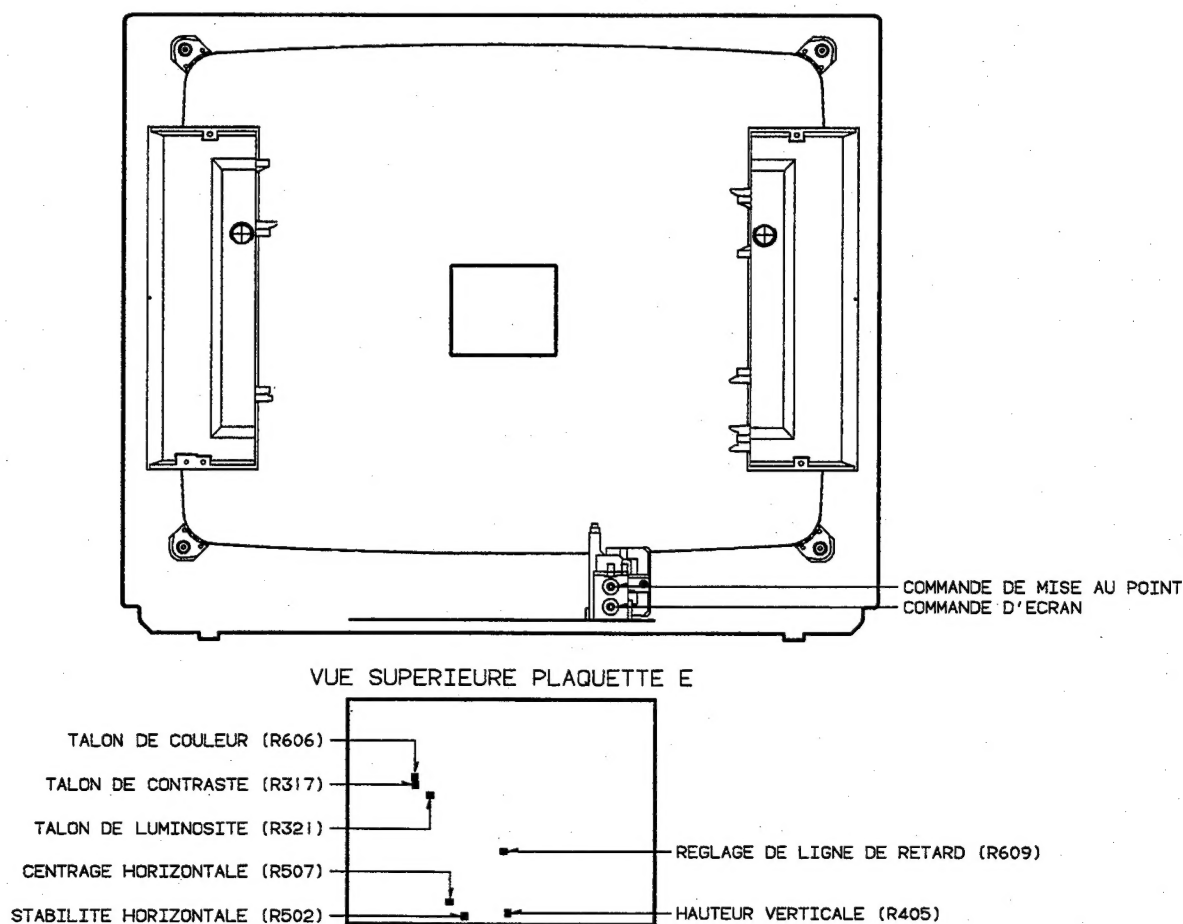


Fig. 2

## SUGGESTIONS DE SERVICE

### COMMENT RETIRER LE PANNEAU ARRIERE

1. Retirer les 5 vis (A), comme illustré Fig. 3.
2. Introduire un tournevis plat dans la fente de chaque dispositif de fixation et détacher les 5 dispositifs, comme illustré Fig. 4.

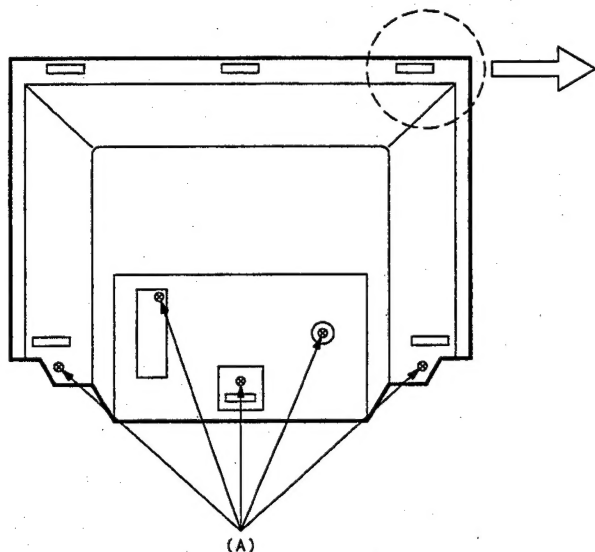


Fig. 3

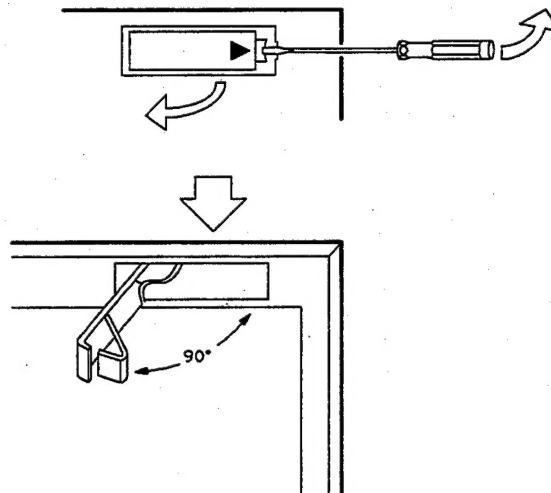


Fig. 4

### COMMENT METTRE LE CHASSIS EN POSITION D'ENTRETIEN

1. Retirer les 3 vis (B), comme illustré Fig. 5.
2. Retirer la vis (C), comme illustré Fig. 6.
3. Tenir et soulever les languettes (D) du châssis, comme illustré Fig. 6, et tirer le châssis vers soi.

### COMMENT DEPOSER LES ENCEINTES ACOUSTIQUES

1. Retirer les 2 vis (E) et les 2 crochets, comme illustré Fig. 6.
2. Tirer les enceintes acoustiques vers soi.

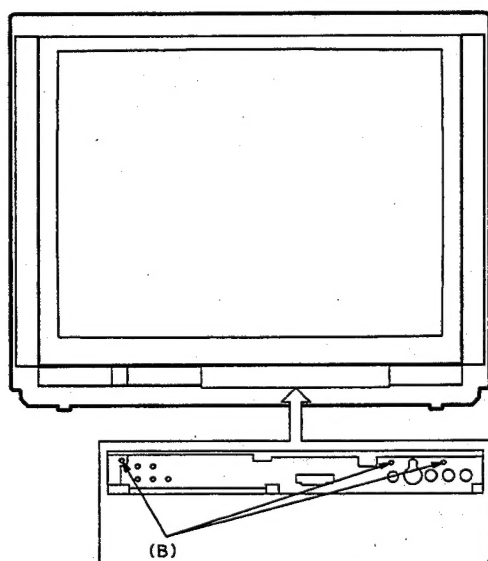


Fig. 5

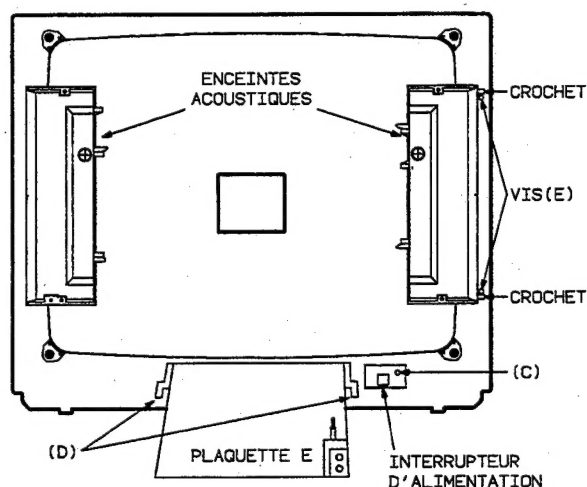


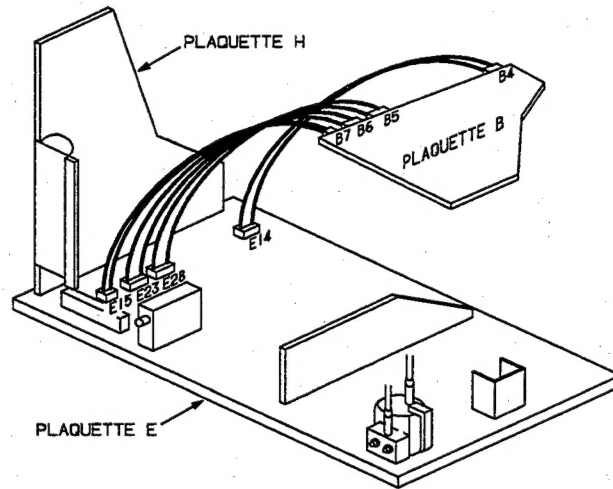
Fig. 6



**POSITION D'ENTRETIEN DE LA PLAQUETTE B**

1. Séparer la plaquette B de plaquette E.
2. Connecter un fil prolongateur entre la plaquette B et la plaquette E, comme illustré Fig. 7.

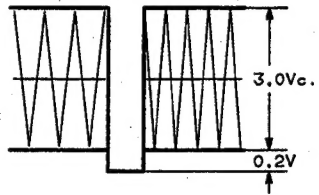
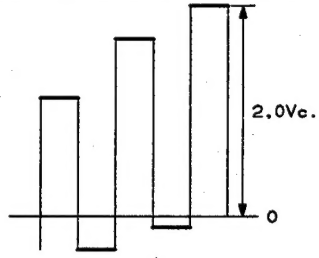
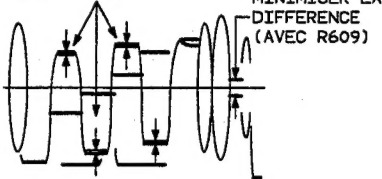
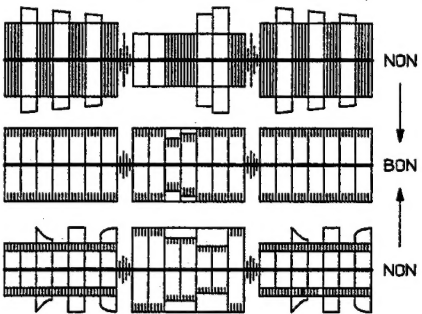
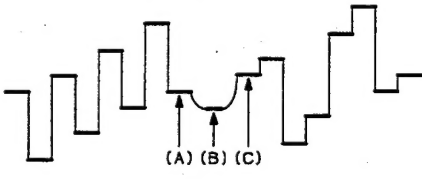
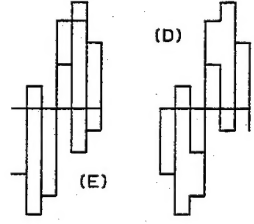
**Nota :** Un jeu de fils prolongateurs est fourni pour l'entretien et son numéro de pièce est TZS709006.



**Fig. 7**

## REGLAGES

POINT / PREPARATION	PROCEDURE DE REGLAGE
<b>TENSION B</b> 1. Faire fonctionner le récepteur de télévision. 2. Régler les commandes : Luminosité ..... minimum Luminosité auxiliaire ..... minimum	1. Vérifier que la tension aux points d'essai indiqués est telle que spécifiée. TPE1 : $160 \pm 2$ V      TPE5 : $12,0 \pm 1,0$ V TPE2 : $5,0 \pm 0,5$ V      TPE10 : $210 \pm 10$ V TPE3 : $36,0 \pm 2$ V      TPE34 : $26,5 \pm 1,5$ V TPE4 : $15,5 \pm 1,0$ V
<b>RF AGC</b> 1. Recevoir une mire Philips. 2. Régler le niveau d'entrée sur $60 \pm 2$ dB. ( $75\Omega$ ouverts ) 3. Raccorder un oscilloscope à TPE9 avec mode c.c.	1. Tourner la commande AGC RF ( R135 ) à fond dans le sens des aiguilles d'une montre. 2. Tourner lentement R135 dans le sens inverse des aiguilles d'une montre pour la régler au point juste avant que la tension en TPE9 tombe.
<b>HAUTE TENSION</b> 1. Recevoir une mire quadrillée. 2. Régler les commandes : Luminosité ..... minimum Contraste ..... minimum Luminosité auxiliaire ..... minimum	1. Raccorder un voltmètre c.c. à TPE1 et vérifier que la tension est de $160 \pm 2$ V. 2. Raccorder un indicateur de haute tension ( type électrostatique ) à une anode du tube - image. 3. Vérifier que la haute tension est dans une gamme de 28,0 ( +1,0 , -1,5 ) kV.
<b>CONTROLE AUTOMATIQUE DE FREQUENCE ( CAF )</b> 1. Mettre en marche le téléviseur. 2. Recevoir un signal SECAM en bande III. 3. Appliquer un signal continu de 38,9 MHz à TEP48. 4. Connecter un voltmètre digital à TPE22:	1. Régler L107 pour une tension de $5,6 \pm 0,1$ V à TPE22. 2. Faire varier la fréquence ( 38,9 MHz ) du générateur de $\pm 100$ kHz et observer la tension du voltmètre digital : + 100 kHz inférieur à 3,5 V - 100 kHz supérieur à 7,0 V 3. Recevoir un signal SECAM en bande I. 4. Changer de 38,9 MHz vers 34,2 MHz. 5. Régler C121 pour obtenir une tension de $5,6 \pm 0,1$ V à TPE22. 6. Faire varier la fréquence ( 34,2 MHz ) du générateur de $\pm 100$ kHz et observer la tension du voltmètre digital : + 100 kHz inférieur à 3,5V. - 100 kHz supérieur à 7,0V.
<b>CONTROLE AUTOMATIQUE DE PHASE</b> 1. Appliquer une mire PAL de type Philips. 2. Position des réglages. Couleur ..... maximum Contraste ..... maximum 3. Mettre TPE76 vers la masse. 4. Brancher un oscilloscope à TPE15.	1. Régler le contrôle automatique de phase C637 jusqu'à ce que les couleurs se stabilisent. 2. Enlever la liaison vers la masse et s'assurer de la stabilité des couleurs.
<b>FREQUENCE PILOTE</b> 1. Recevoir un signal avant un son stéréo. 2. Connecter un oscilloscope à TPE18.	1. Régler L2201 et R2209 pour une amplitude sinusoïdale maximum. 2. Changer le signal stéréo en signal multiplex connecter l'oscilloscope à TPE17. 3. Régler L2201 et R2210 pour une amplitude sinusoïdale maximum.
<b>SEPARATION DE CANAUX</b> 1. Recevoir un signal stéréo avec 40% de modulation à 1 kHz pour le canal droit et 0% de modulation pour le canal gauche. 2. Connecter un oscilloscope à TPE14.	1. Régler R2224 pour une amplitude minimum à TPE14.
<b>IDENTIFICATION SECAM</b> 1. Appliquer une mire SECAM de type Philips. 2. Connecter un oscilloscope à TPE68. 3. Masse TPE76. 4. Ponter TPE73 et TPE5.	1. Régler L607 pour une amplitude maximum à TPE68. 2. Oter les pontages et vérifier la stabilité des couleurs.

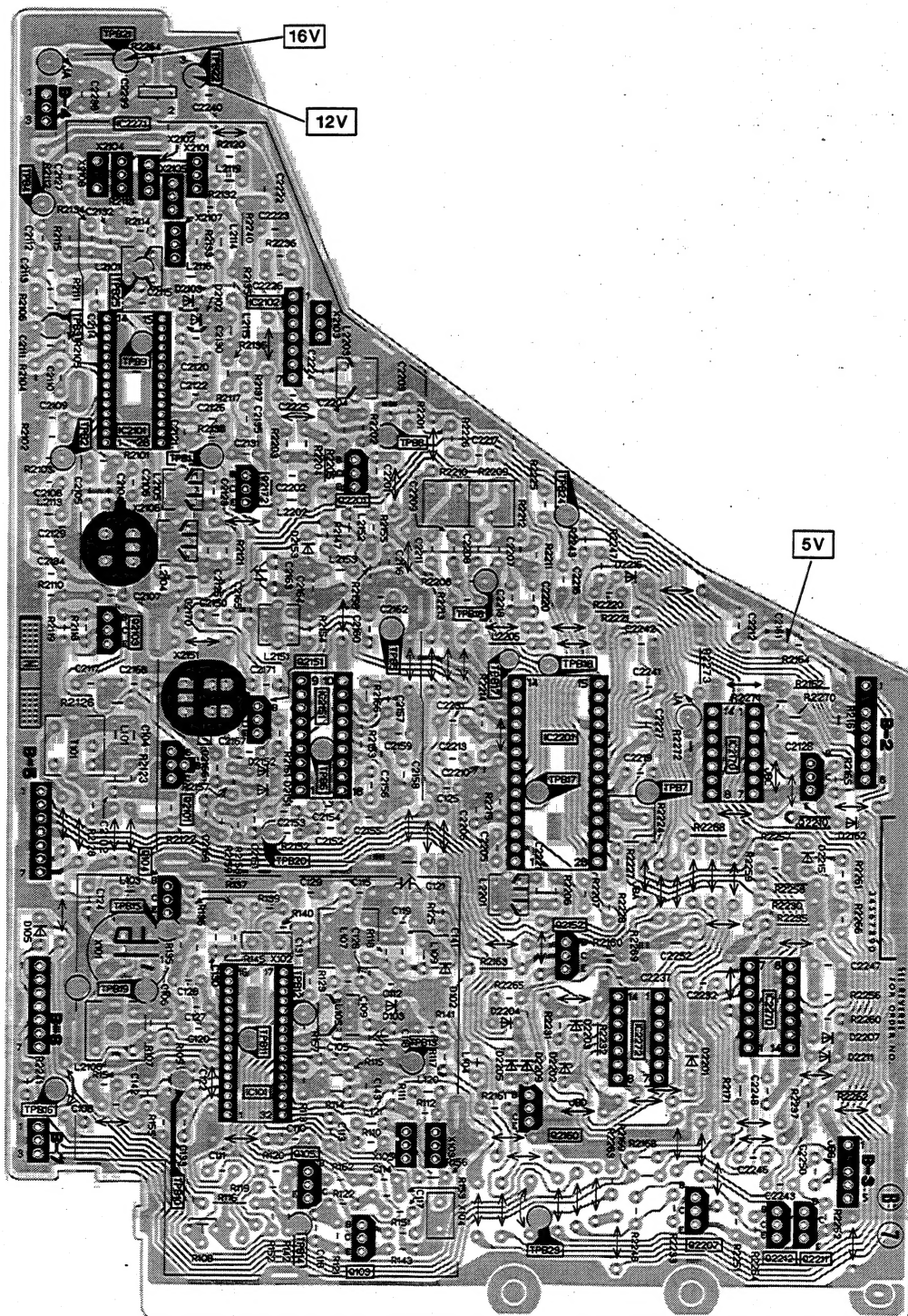
POINT / PREPARATION	PROCEDURE DE REGLAGE	FORMES D'ONDE
<b>REGLAGE DE BASE CONTRASTE</b> 1. Appliquer une mire UHF SECAM de type Philips. 2. Réglage des contrôles : Lumière ..... minimum Contraste ..... maximum Couleur ..... minimum Couleur auxiliaire ..... minimum 3. Brancher un oscilloscope à TPE15. 4. Masse TPE7.	1. Régler le talon de lumière (R321) pour obtenir signal Fig. 8. 2. Régler le talon de Contraste auxiliaire (R317) pour obtenir 3,0 V crêtes du niveau.	 <p>Fig. 8</p>
<b>REGLAGE DE BASE COULEURS</b> 1. Appliquer une mire UHF SECAM de type Philips. 2. Réglage des contrôles : Lumière ..... minimum Contraste ..... maximum Couleur auxiliaire ..... centre 3. Connecter un voltmètre digital à TPE21. 4. Brancher l'oscilloscope à TPE15 en mode continu.	1. Régler le potentiomètre couleur pour une tension de 5,3 V à TPE21. 2. Connecter une résistance de 100 $\Omega$ entre TPE6 et la masse. 3. Régler le potentiomètre couleur auxiliaire (R606) pour une tension de 2,0 V crêtes du niveau à TPE15. 4. Oter le pontage de TPE8.	 <p>Fig. 9</p>
<b>REGLAGE DE LA LIGNE A RETARD</b> 1. Recevoir un signal PAL avec une mire type Philips. 2. Mettre TPE6 vers la masse. 3. Brancher l'oscilloscope à TPE15 en mode continu.	1. Régler la ligne à retard R609 et le bobinage L603 pour obtenir à TPE15 la forme d'onde de la Fig. 10.	<p>MINIMISER LA DIFFERENCE (AVEC L603)</p> <p>MINIMISER LA DIFFERENCE (AVEC R609)</p>  <p>Fig. 10</p>
<b>FILTRE DE CLOCHE (SECAM)</b> 1. Appliquer une mire de barre couleur SECAM. 2. Branche l'oscilloscope à TPE69.	1. Régler L609 afin d'obtenir la forme d'onde indiquée sur la Fig. 11.	 <p>Fig. 11</p>
<b>REGLAGE DU DISCRIMINATEUR SECAM</b> 1. Appliquer une mire de type Philips (SECAM). 2. Branche l'oscilloscope à TPE71.	1. Régler L606 A, B et C sont de même niveau (Fig. 12). 2. Brancher l'oscilloscope à TPE70. 3. Régler L605 D et E chevauchent (Fig. 13). 4. Brancher l'oscilloscope à TPE71. 5. Confirmer si A-C est une ligne droite.	 <p>Fig. 12</p>  <p>Fig. 13</p>

mémorandum

## VUES DU CONDUCTEUR

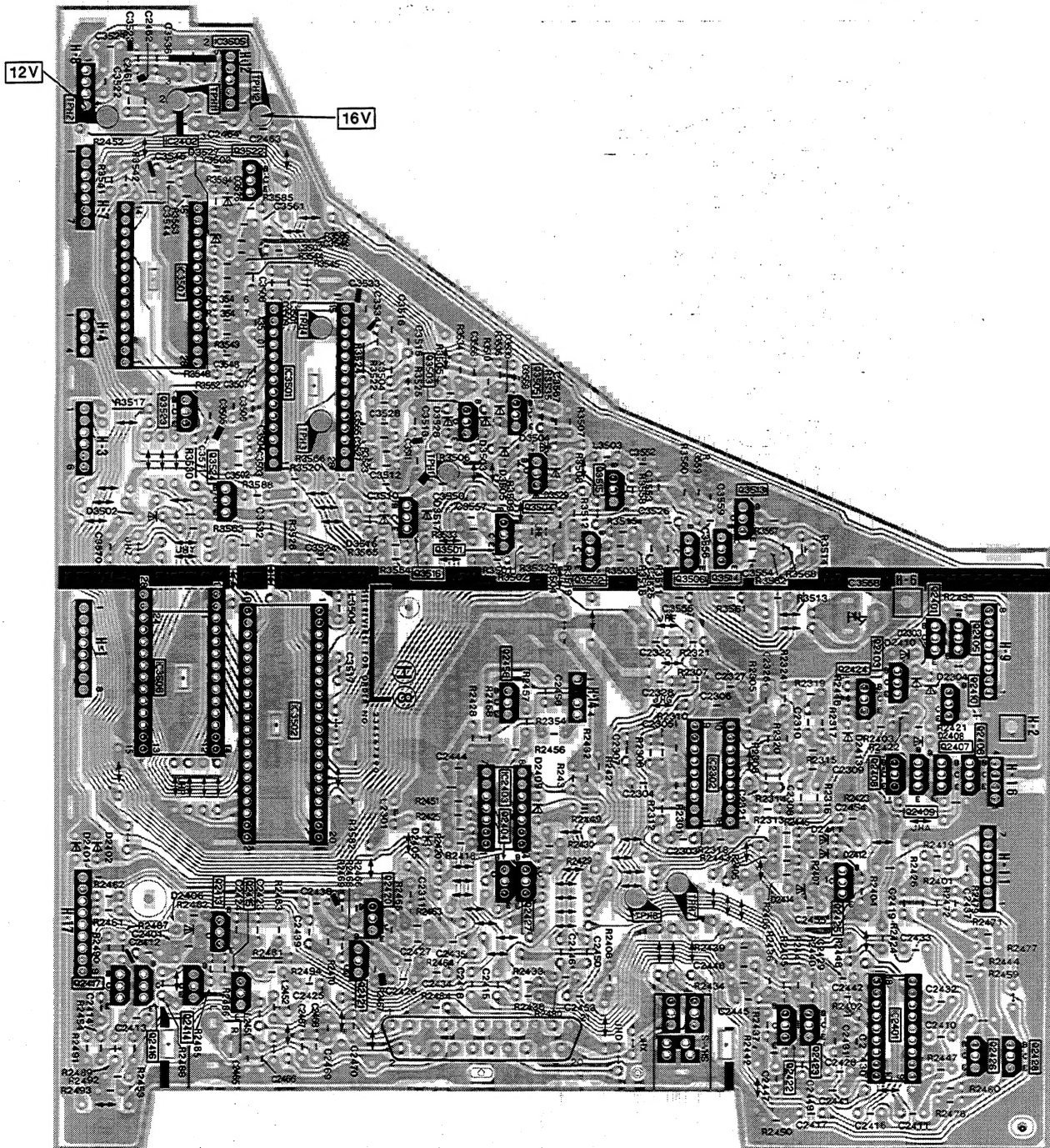
## PLAQUETTE B TNP107201AH

I.C.	IC2271 IC2101	IC2102 IC101	IC2151	IC2201	IC2272	IC2170 IC2270
TRANSISTOR	Q2103 Q2101 Q104	Q2151	Q2201 Q105 Q103	Q2152 Q2160	Q2207	Q2210
DIODE		D2152 D2151	D2153 D103	D102 D2204 D2205 D2209 D2202	D2216 D2201	D2215 D2207 D2211
TEST POINT	TPB4 TPB3 TPB2	TPB21 TPB9 TPB1	TPB15 TPB19 TPB10	TPB20 TPB6 TPB11 TPB12 TPB14	TPB8 TPB5 TPB13	TPB24 TPB17 TPB18 TPB7 TPB23

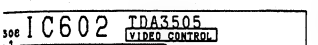


PLAQUETTE H TNP107481

I.C.	IC2403	IC2302	IC2401
TRANSISTOR	Q2413 Q2414 Q2417Q2416 Q2415 Q2420 Q2421	Q2456 Q2404Q2427	Q2401 Q2405 Q2424 Q2403 Q2410 Q2408Q2407 Q2409 Q2406 Q2426Q2428
DIODE	D2402 D2401 D2406	D2405 D2409	D2411 D2410 D2304 D2408
TEST POINT	TPH8 TPH7		







## TABLEAU DE MIRES DE FORMES D'ONDES





## T

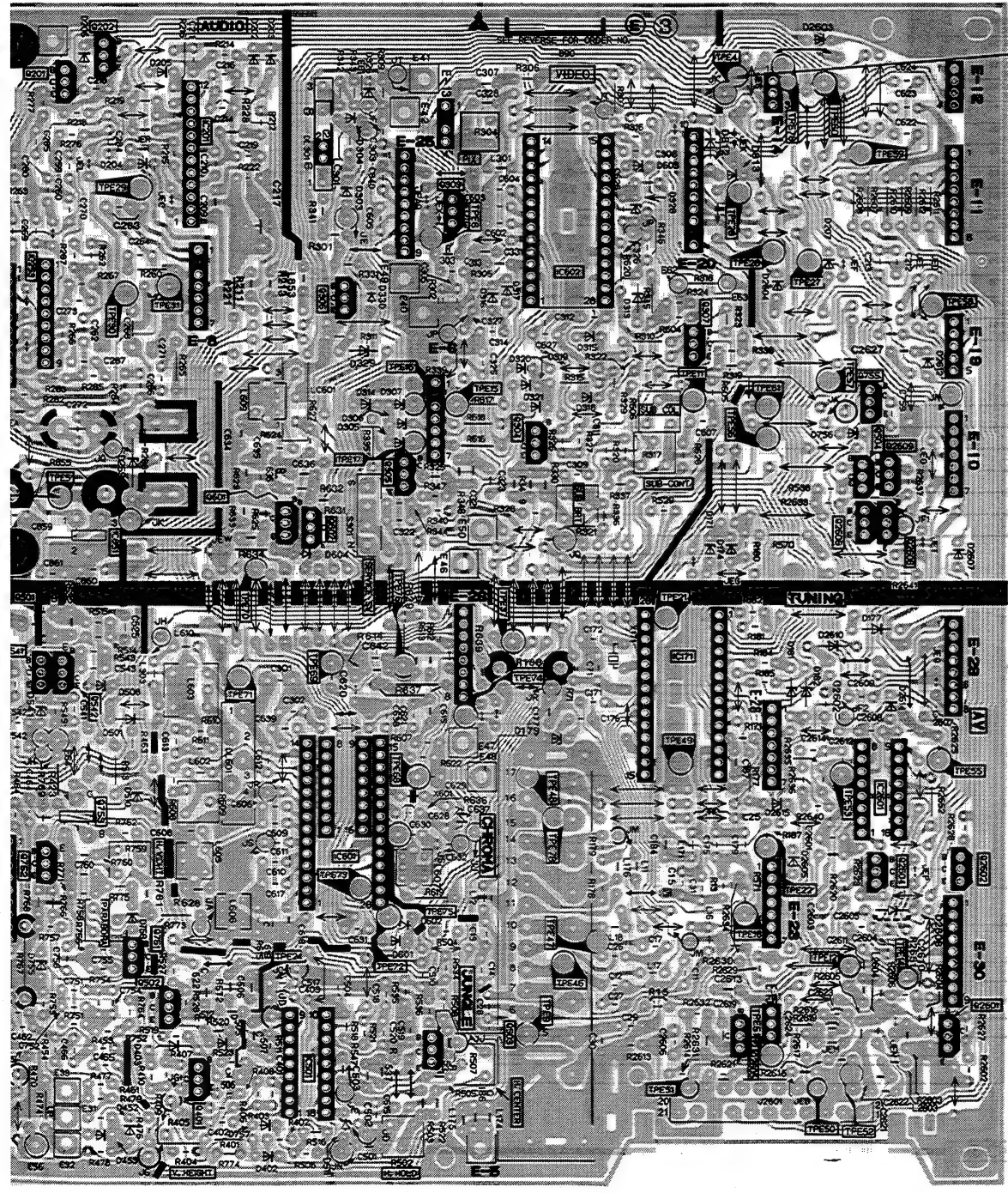
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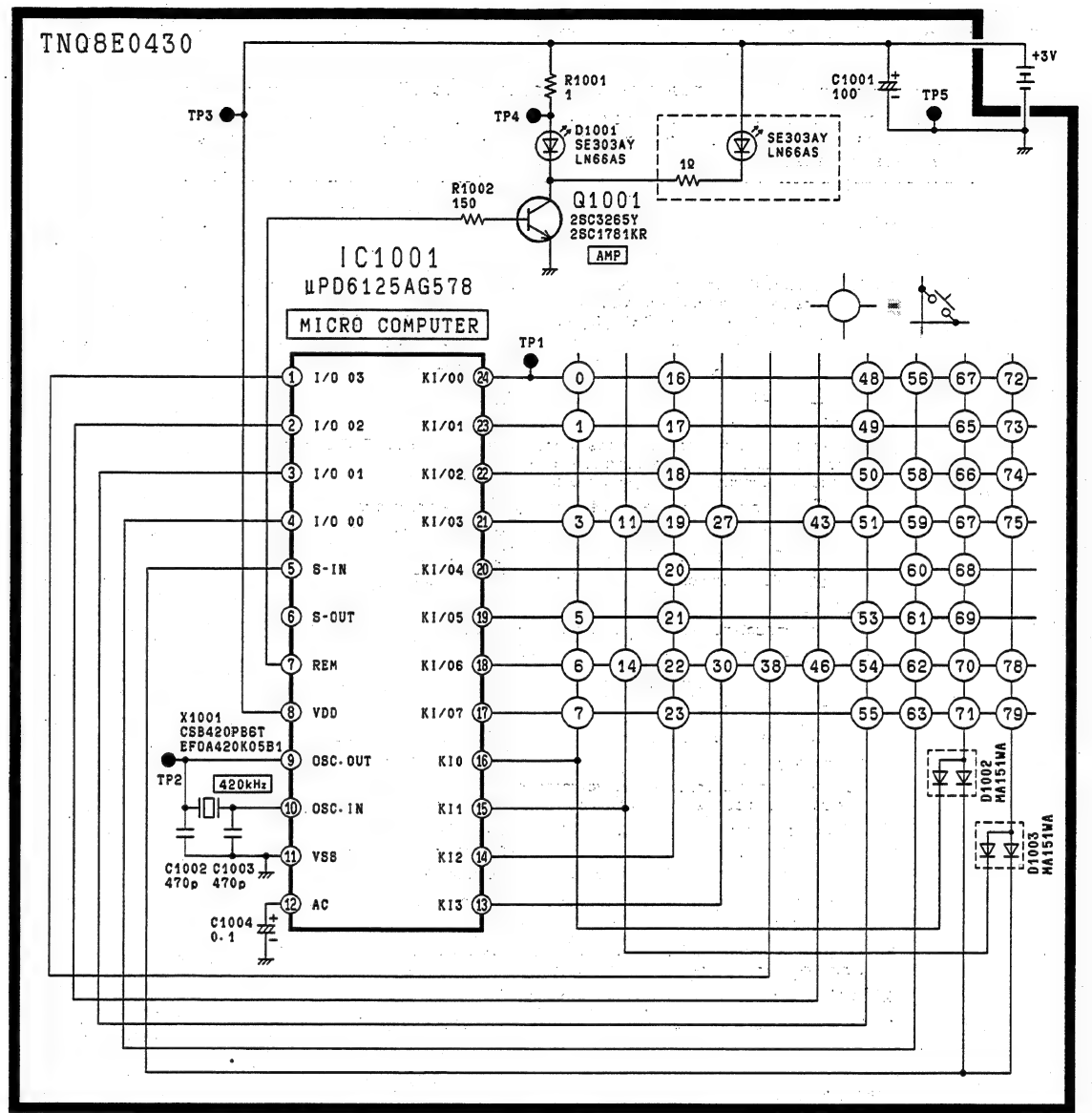


E TNP197019AV pour TC-28A1F  
TNP197019BH pour TC-24A1F

IC851	IC201	IC601	IC602	IC171	IC2601
Q201 Q202	Q501	Q601 Q602	Q306	Q304	Q504
Q541 Q542	Q751	Q502	Q401	Q503	Q2606 Q2608
Q752					Q2604 Q2602
D206	D205	D202 D203	D303	D320	D603
D204	D508	D604	D329	D319	D812
D541	D501	D314 D307	D306	D321	D813
D755	D510	D305	D179	D171 D174	D2603
D453 D452	D403 D505	D511		D181 D182	D2610 D177
				D2615	D2614
				D2605	
TPE29	TPE16 TPE15	TPE6	TPE4 TPE78 TPE60	TPE28 TPE26 TPE27 TPE59	TPE58
TPE30 TPE31	TPE17	TPE1	TPE11	TPE21	TPE57
TPE5	TPE70	TPE69	TPE48	TPE22	TPE53
	TPE71	TPE76	TPE78	TPE49	TPE52
	TPE24	TPE75	TPE47	TPE18	TPE55
	TPE73	TPE72	TPE46	TPE51 TPE50	



TELECOMMANDE



KEY NO.	CUSTOM CODE	DATA CODE	FUNCTION
0	02	02	REW
1	02	08	REC
3	00	24	-/-
5	02	03	FF
6	00	0D	VOL. -
7	02	0A	PLAY
11	00	21	C
14	00	19	0
16	00	38	S/P
17	00	26	RECALL
18	00	07	NORMAL
19	00	16	7
20	00	33	AMBIENCE
21	00	03	1/11
22	00	17	8
23	00	32	SP/MU
27	00	13	4
30	00	14	5
38	00	20	POWER (TV)
43	00	12	3
46	00	22	CH. UP (TV)
48	02	00	STOP
49	02	23	CH. DN (VTR)
50	02	22	CH. UP (VTR)
51	00	15	6
53	02	0C	FLAME ADY
54	00	23	CH. DN (TV)
55	02	06	PAUSE
56	00	1C	TONE -
58	02	20	POWER (VTR)
59	00	18	9
60	00	1D	BASS -
61	00	2F	BASS +
62	00	01	VOL. +
63	00	27	TONE +
64	00	2E	CONTRAST -
65	00	0E	COLOUR -
66	00	1D	COLOUR +
67	00	0B	MUTE
68	00	0F	BRIGHT -
69	00	06	BRIGHT +
70	00	2A	TV/AV
71	00	28	CONTRAST +
72	00	04	BALANCE L
73	00	2C	FINE -
74	00	2B	FINE +
75	00	10	1
76	00	11	2
79	00	05	BALANCE R

CUSTOM CODE 00 = TV  
02 = VTR

SCHEMA - TECHNIQUE POUR MODELE  
TC - 24A1F / 28A1F ( ALPHA-2W CHASSIS )

Remarque importante pour la sécurité

Les éléments portant la marque  $\Delta$  possèdent des caractéristiques de sécurité spéciales. Lors du remplacement de l'une quelconque de ces pièces, n'utiliser que celles spécifiées par la fabricant.

Nota :

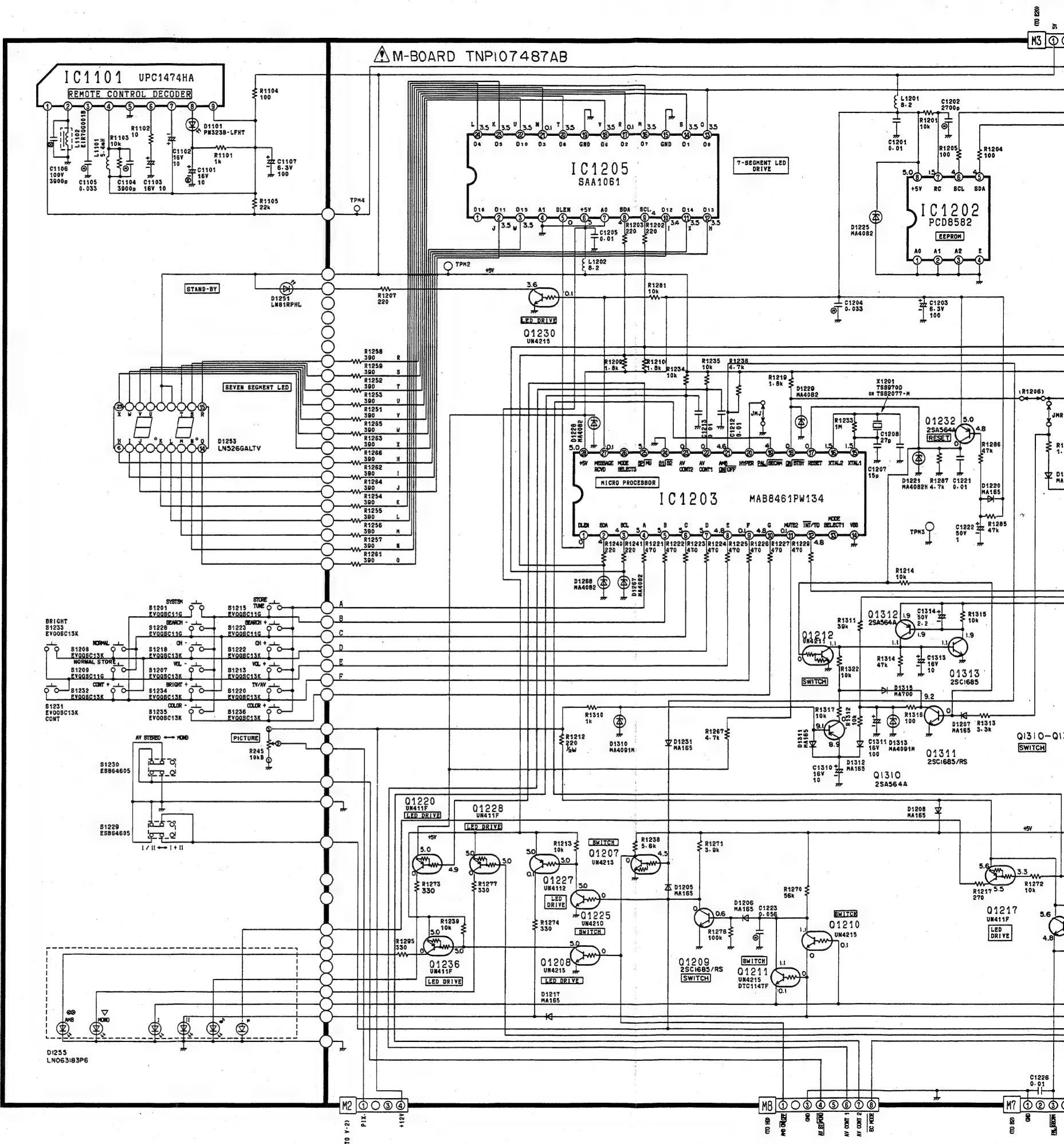
- RESISTANCE**  
Toutes les résistances sont des résistances au carbone 1/4W, sauf indication contraire par les marques suivantes:  
L'unité de résistance est l'OHM [Ω] (k = 1.000, M = 1.000.000).  
○ : Ininflammable  
△ : Solide  
⊠ : Bobiné  
⊞ : Oxyde métallique  
⊙ : Film métallique  
⊗ : Fusible
- CONDENSATEUR**  
Toutes les condensateurs sont des condensateurs céramique 50V, sauf indication contraire par les marques suivantes:  
L'unité de capacité est le µF, sauf indication contraire.  
⊞ : Compensation de température  
⊙ : Polyester  
⊞ : Polyester métallisé  
⊗ : Polypropylène  
⊞ : Electrolytique  
⊙ : Bipolaire  
⊞ : Tantale trempé  
⊗ : Type Z
- BOBINE**  
L'unité d'inductance est le µH, sauf indication contraire.
- POINT D'ESSAI**  
○ : Position du point d'essai
- SYMBOLE DE TERRE**  
⏏ : Terre du châssis (froid)    ⊥ : Terre de ligne (chaud)
- MESURE DE TENSION**  
La tension est mesurée avec un voltmètre c.c.  
Les conditions de mesure sont les suivantes:  
Source d'alimentation..... CA 220 V, 50 Hz  
Signal de réception ..... Signal barre couleur ( RF )  
Toutes les commandes utilisateur ..... Position maximum
- Le numéro dans le cercle rouge indique le numéro de la forme d'onde.  
( Voir le tableau de mires de formes d'ondes. )
- Lorsque la flèche ( ↗ ) est repérée, la connexion est facilement trouvée, il suffit de suivre la direction de la flèche.
- ➡ : Indique le sens du signal principal.
- Ce schéma est à jour au moment de l'impression et est modifiable sans préavis.

Remarque :

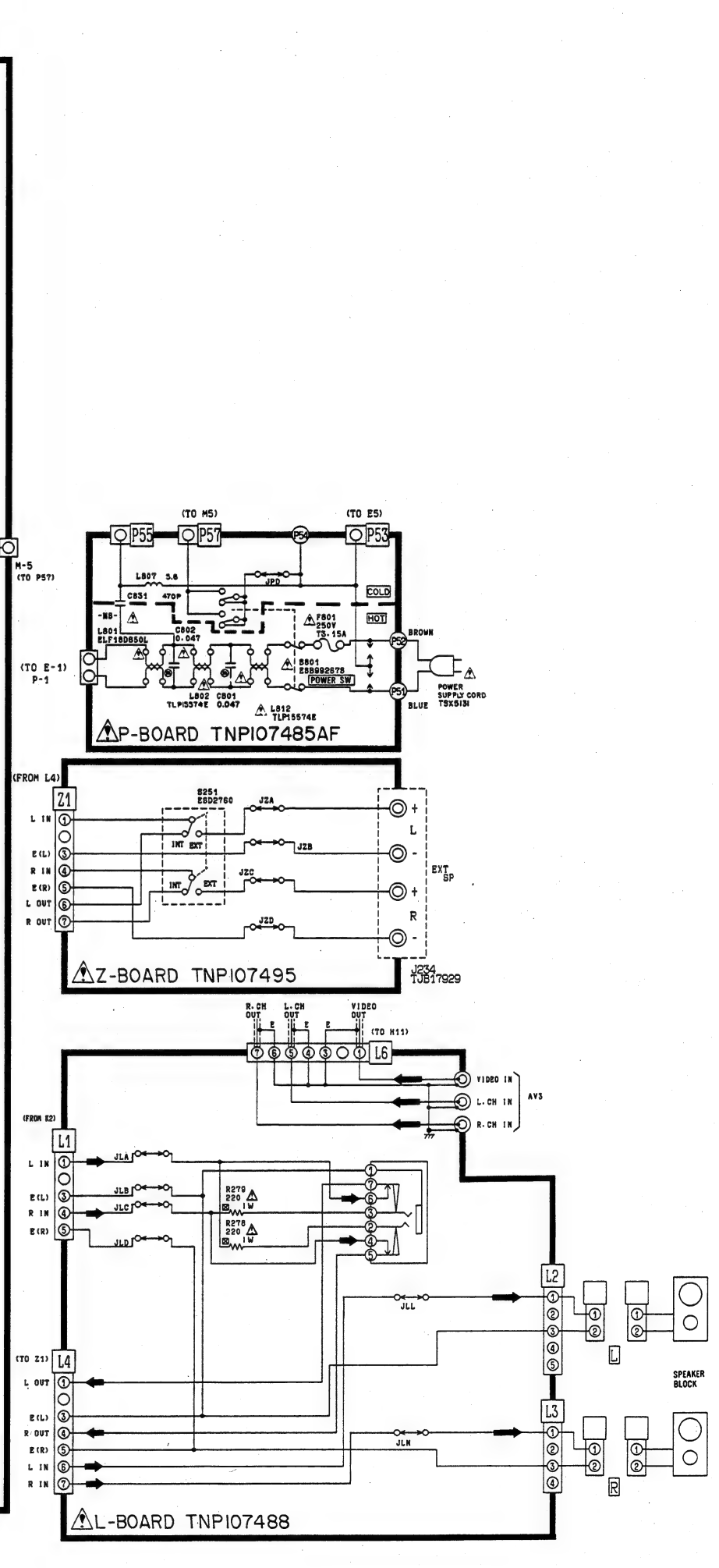
Le circuit d'alimentation contient une zone de circuit qui utilise une alimentation séparée pour isoler la connexion à la terre. Le circuit est défini par les indications chaud ( HOT ) et froid ( COLD ) dans le diagramme schématique. Prendre les précautions suivantes. Tous les circuits, sauf le circuit d'alimentation, sont froids.

Précautions

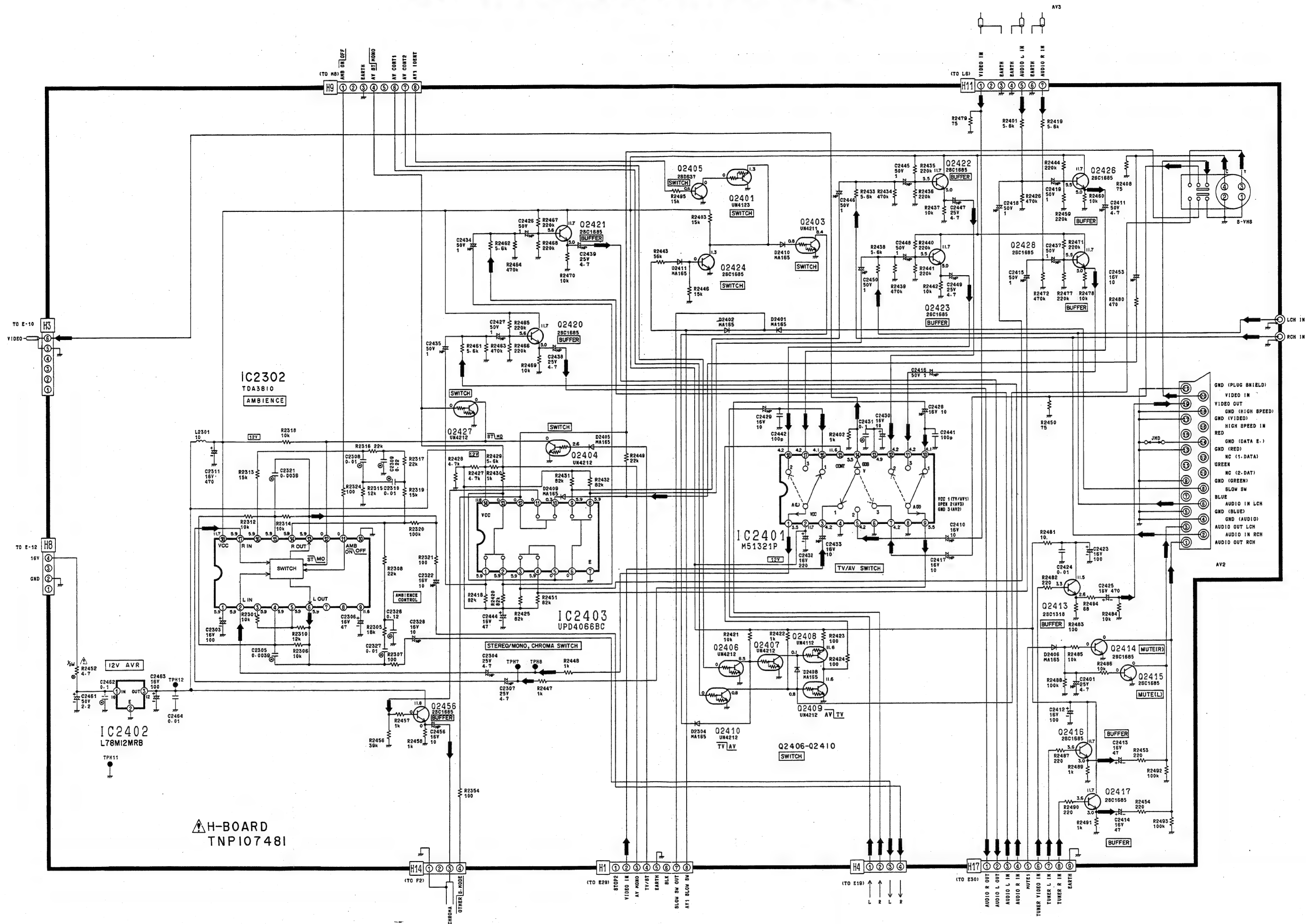
- Ne pas toucher la partie chaude ou en même temps les parties chaude et froides. Cela présente un risque de décharge électrique.
- Ne pas court-circuiter les circuits chaud et froids car un fusible peut sauter et des pièces se casser.
- Ne pas raccorder un instrument, comme un oscilloscope, simultanément aux circuits chaud et froids car un fusible peut sauter. Raccorder la terre des instruments à la connexion de terre du circuit mesuré.
- Toujours débrancher la fiche d'alimentation avant de déposer le châssis.









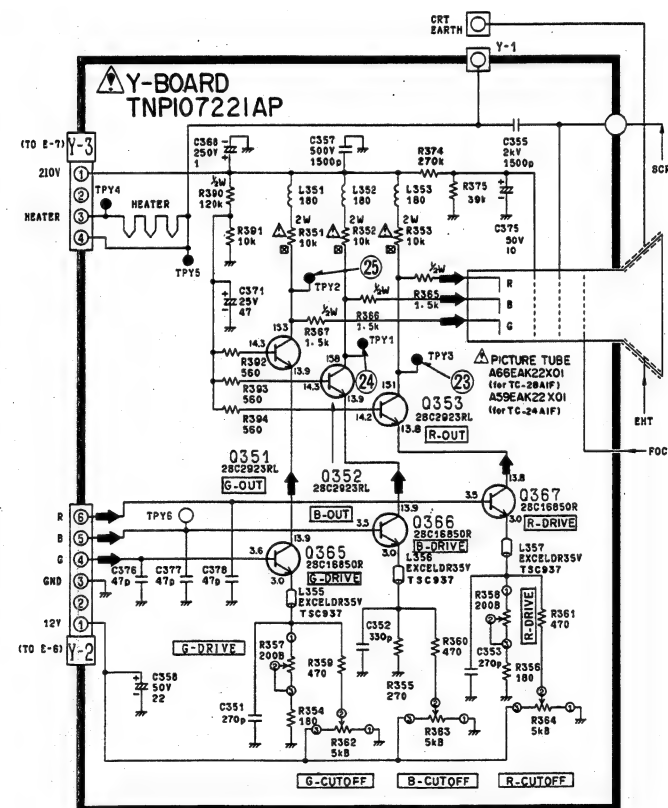
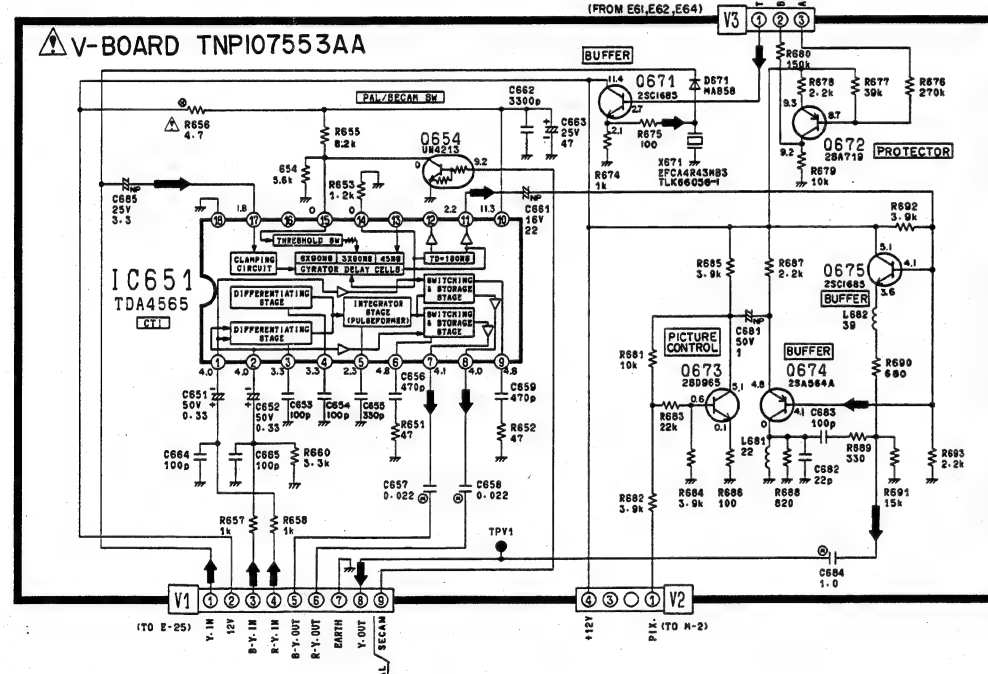
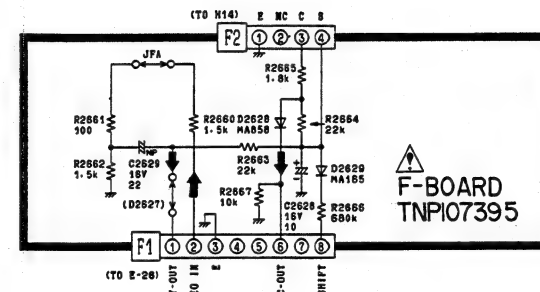
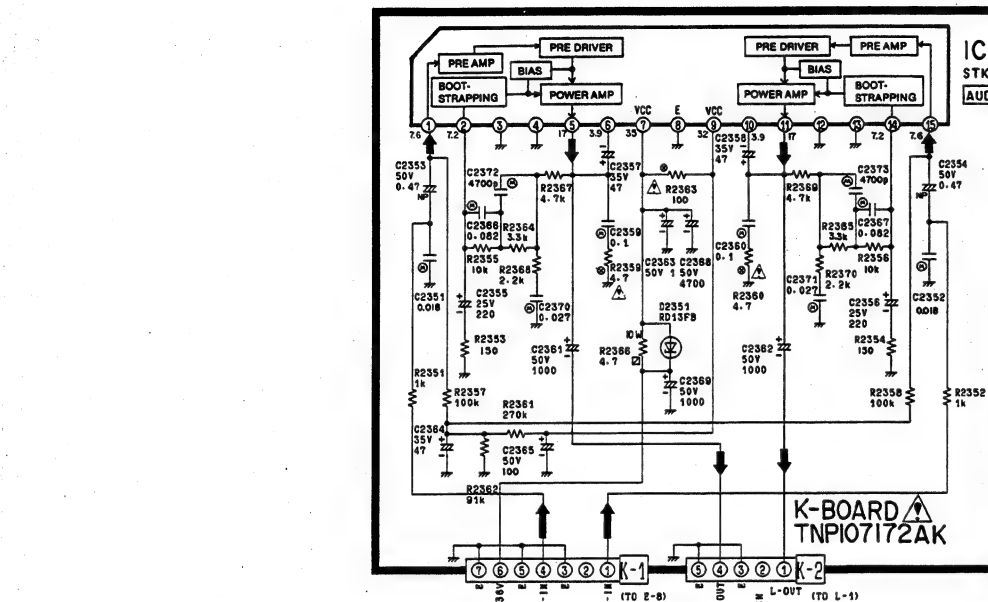
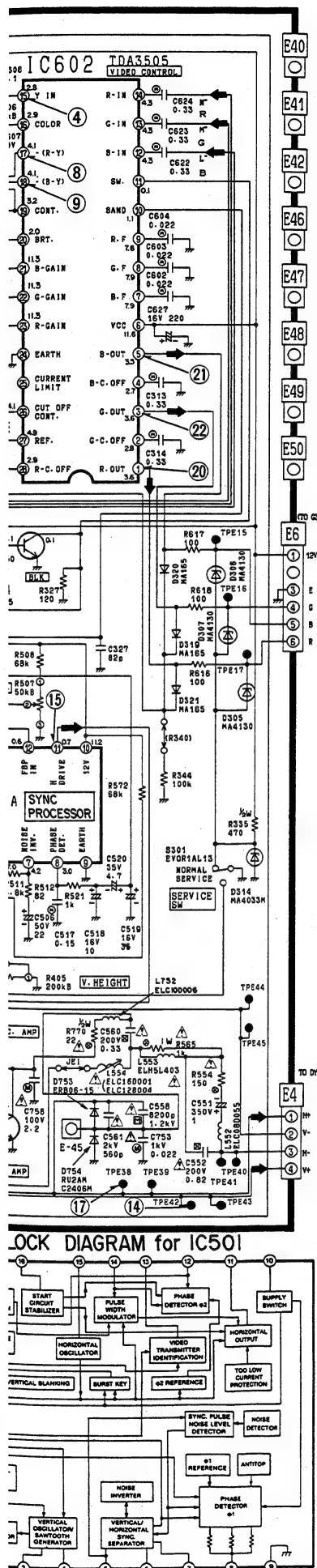
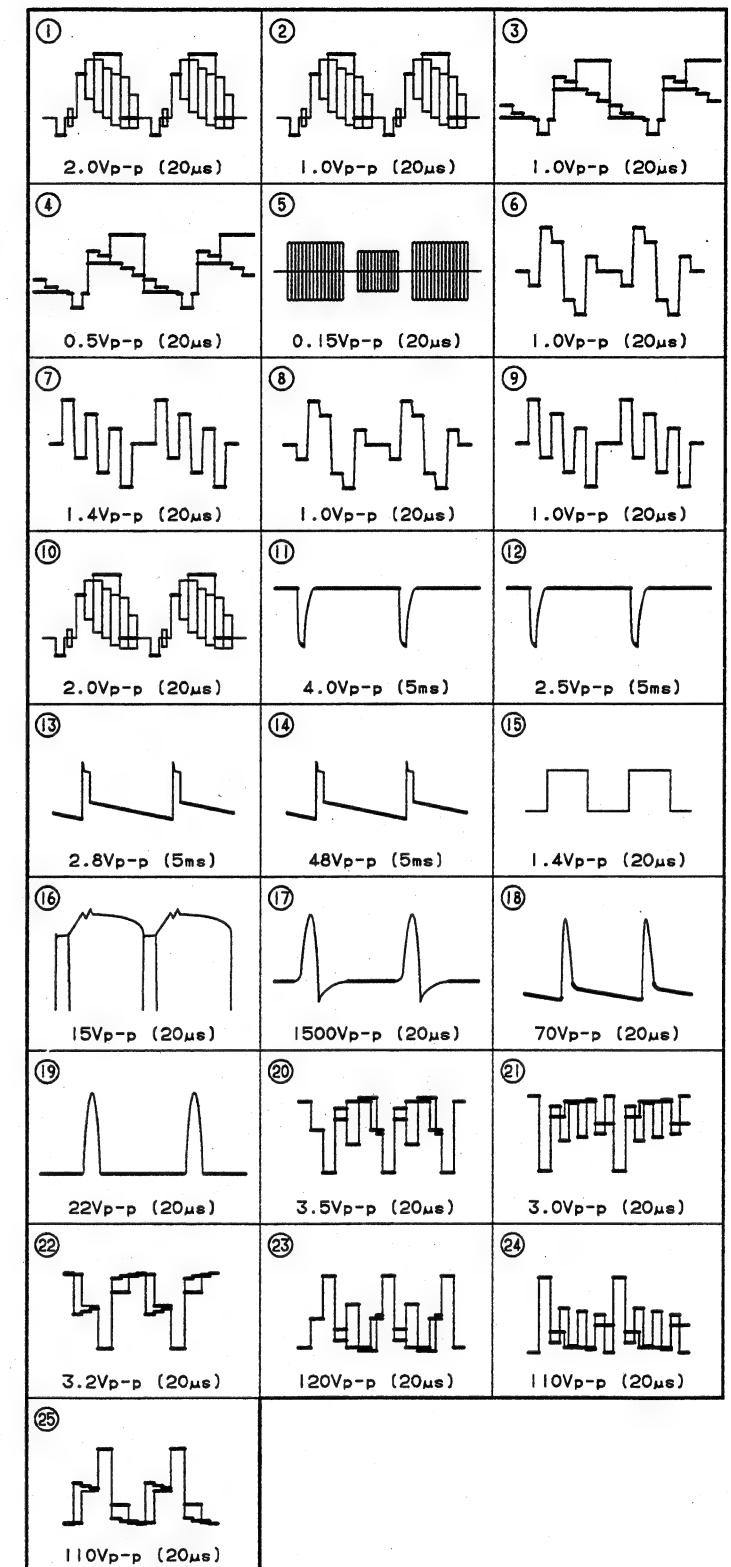








# TABLEAU DE MIRES DE FORMES D'ONDES



## LISTE DES PIÈCES DE RECHANGE

## Remarque importante pour la sécurité

Les éléments portant la marque  $\Delta$  possèdent des caractéristiques de sécurité spéciales. Lors du remplacement de l'une quelconque de ces pièces, n'utiliser que celles spécifiées par la fabricant.

Ref. No.	Part No.	Description
<b>MISCELLANEOUS COMPONENTS</b>		
1	A59EAK22X01 A66EAK22X01	PICTURE TUBE for TC-24A1F PICTURE TUBE for TC-28A1F $\Delta$
2	EAB1064LF	SPEAKER (LEFT)
3	EAB1064RF	SPEAKER (RIGHT)
	ERC12GJ825	RESISTOR for EARTH SPRING
	ERD25TJ105	RESISTOR (Carbon 1M $\Omega$ )
	F9-4-220	HEAT SINK for TRANSISTOR
4	TBL61319	SET FOOT
5	TBM120885	LABEL
6	TBM120911 TBM120921	MODEL NAME PLATE for TC-28A1F MODEL NAME PLATE for TC-24A1F
7	TBM153010	Panasonic BADGE
8	TBM179014	BLIND SHEET (AERIAL COVER)
9	TBM8E1002-1	AV LABEL for TC-28A1F
10	TBX2880900	POWER BUTTON
	TBX3783600	STEREO-MONO BUTTON
11	TEK13321	DAMPER
	TEK13321-A	LID SWITCH
12	TEK17918	DOOR SWITCH
13	TES2259	POWER BUTTON SPRING
14	THN8E001	CRT NUT
16	TKP1757521	SPEAKER NET for TC-28A1F
	TKP1757541	SPEAKER NET for TC-24A1F
17	TKP1811071	SMOKED PANEL
18	TKP1811081	PANEL (LEFT) for TC-28A1F
19	TKP1811091	DOOR
20	TKP1811142	PANEL (RIGHT) for TC-28A1F
21	TKU581301 TKU581601	REAR COVER for TC-28A1F REAR COVER for TC-24A1F $\Delta$
22	TKY182200 TKY182500	CABINET for TC-28A1F CABINET for TC-24A1F $\Delta$
23	TMW27175-1	CONTROL BRACKET
	TNP107172AK	K-BOARD $\Delta$
	TNP107201AH	B-BOARD $\Delta$
	TNP107221AP	Y-BOARD $\Delta$
	TNP107395	F-BOARD $\Delta$
	TNP107481	H-BOARD $\Delta$
	TNP107485AF	P-BOARD $\Delta$
	TNP107487AB	M-BOARD $\Delta$
	TNP107488	L-BOARD $\Delta$
	TNP107495	Z-BOARD $\Delta$
	TNP107553AA	V-BOARD $\Delta$
	TNP197019AV	E-BOARD for TC-28A1F $\Delta$
	TNP197019BH	E-BOARD for TC-24A1F $\Delta$
24	TNQ8E0430	REMOTE CONTROLLER
	TPC1853004	OUTER CARTON for TC-28A1F
	TPC1853704	OUTER CARTON for TC-24A1F
	TPD191498	CUSHION for TC-24A1F
	TPD192500	CUSHION for TC-24A1F
	TPD8E514	CUSHION for TC-28A1F
	TPD8E515	CUSHION for TC-28A1F
	TQB8E0471	INSTRUCTION BOOK for TC-28A1F $\Delta$
	TQB8E0479	INSTRUCTION BOOK for TC-24A1F $\Delta$
25	TSX5131	POWER SUPPLY CORD $\Delta$
	UM-4NEPE-2S	BATTERY
26	UV518/256L	TUNER $\Delta$
	138-94350	COIL
	462200102751	CAPACITOR
	520-001	FUSE HOLDER

Ref. No.	Part No.	Description
<b>RESISTORS</b>		
R13	ERD25TJ470	Carbon 47 $\Omega$ 5% 0.25W
R15	ERD25TJ103	Carbon 10k $\Omega$ 5% 0.25W
R70	ERG1ANJ273	Metal 27k $\Omega$ 5% 1W $\Delta$
R71	ERD25TJ221	Carbon 220 $\Omega$ 5% 0.25W
R105	ERD25TJ392	Carbon 3.9k $\Omega$ 5% 0.25W
R106	EVND1AA00B14	IF AGC 10k $\Omega$ B
R107	ERD25TJ471	Carbon 470 $\Omega$ 5% 0.25W
R108	EVND1AA00B54	RF AGC 50k $\Omega$ B
R110	ERD25TJ223	Carbon 22k $\Omega$ 5% 0.25W
R111	ERD25TJ681	Carbon 680 $\Omega$ 5% 0.25W
R112	ERD25TJ201	Carbon 200 $\Omega$ 5% 0.25W
R113	ERD25TJ472	Carbon 4.7k $\Omega$ 5% 0.25W
R114	ERD25TJ912	Carbon 9.1k $\Omega$ 5% 0.25W
R115	ERD25TJ303	Carbon 30k $\Omega$ 5% 0.25W
R116	ERD25TJ102	Carbon 1k $\Omega$ 5% 0.25W
R117	ERD25TJ272	Carbon 2.7k $\Omega$ 5% 0.25W
R118	ERD25TJ682	Carbon 6.8k $\Omega$ 5% 0.25W
R119	ERD25TJ224	Carbon 220k $\Omega$ 5% 0.25W
R120	ERD25TJ224	Carbon 220k $\Omega$ 5% 0.25W
R121	ERD25TJ184	Carbon 180k $\Omega$ 5% 0.25W
R122	ERD25TJ331	Carbon 330 $\Omega$ 5% 0.25W
R123	ERD25TJ103	Carbon 10k $\Omega$ 5% 0.25W
R125	ERD25TJ222	Carbon 2.2k $\Omega$ 5% 0.25W
R135	ERD25TJ332	Carbon 3.3k $\Omega$ 5% 0.25W
R136	ERD25TJ222	Carbon 2.2k $\Omega$ 5% 0.25W
R137	ERQ12HJ330	Film 33 $\Omega$ 5% 0.5W $\Delta$
R139	ERD25TJ562	Carbon 5.6k $\Omega$ 5% 0.25W
R140	ERD25TJ751	Carbon 750 $\Omega$ 5% 0.25W
R141	ERD25TJ222	Carbon 2.2k $\Omega$ 5% 0.25W
R142	ERD25TJ563	Carbon 56k $\Omega$ 5% 0.25W
R143	ERD25TJ271	Carbon 270 $\Omega$ 5% 0.25W
R145	ERD25TJ684	Carbon 680k $\Omega$ 5% 0.25W
R151	ERD25TJ101	Carbon 100 $\Omega$ 5% 0.25W
R152	ERD25TJ103	Carbon 10k $\Omega$ 5% 0.25W
R153	ERD25TJ274	Carbon 270k $\Omega$ 5% 0.25W
R154	ERD25TJ103	Carbon 10k $\Omega$ 5% 0.25W
R155	ERD25TJ104	Carbon 100k $\Omega$ 5% 0.25W
R156	ERD25TJ222	Carbon 2.2k $\Omega$ 5% 0.25W
R161	ERD25TJ222	Carbon 2.2k $\Omega$ 5% 0.25W
R162	ERD25TJ331	Carbon 330 $\Omega$ 5% 0.25W
R164	ERD25TJ221	Carbon 220 $\Omega$ 5% 0.25W
R171	ERD25TJ103	Carbon 10k $\Omega$ 5% 0.25W
R177	ERD25TJ101	Carbon 100 $\Omega$ 5% 0.25W
R178	ERD25TJ102	Carbon 1k $\Omega$ 5% 0.25W
R179	ERD25TJ102	Carbon 1k $\Omega$ 5% 0.25W
R180	ERD25TJ562	Carbon 5.6k $\Omega$ 5% 0.25W
R181	ERD25TJ103	Carbon 10k $\Omega$ 5% 0.25W
R182	ERD25TJ123	Carbon 12k $\Omega$ 5% 0.25W
R184	ERD25TJ221	Carbon 220 $\Omega$ 5% 0.25W
R185	ERD25TJ221	Carbon 220 $\Omega$ 5% 0.25W
R187	ERD25TJ473	Carbon 47k $\Omega$ 5% 0.25W
R188	ERG1SJ101	Metal 100 $\Omega$ 5% 1W $\Delta$
R211	ERD25TJ222	Carbon 2.2k $\Omega$ 5% 0.25W
R212	ERD25TJ123	Carbon 12k $\Omega$ 5% 0.25W
R213	ERD25TJ123	Carbon 12k $\Omega$ 5% 0.25W
R214	ERD25TJ102	Carbon 1k $\Omega$ 5% 0.25W
R215	ERD25TJ562	Carbon 5.6k $\Omega$ 5% 0.25W
R216	ERD25TJ562	Carbon 5.6k $\Omega$ 5% 0.25W
R218	ERD25TJ153	Carbon 15k $\Omega$ 5% 0.25W

Ref. No.	Part No.	Description
R221	ERQ14AJ580	Film 56Q 5% 0.25W <span>△</span>
R245	EVUF3AM20B14	PICTURE 10kQB
R278	ERG1ANJ221	Metal 220Q 5% 1W <span>△</span>
R279	ERG1ANJ221	Metal 220Q 5% 1W <span>△</span>
R301	ERD25TJ152	Carbon 1.5kQ 5% 0.25W
R309	ERD25TJ103	Carbon 10kQ 5% 0.25W
R315	ERD25TJ103	Carbon 10kQ 5% 0.25W
R316	ERD25TJ823	Carbon 82kQ 5% 0.25W
R317	EVND4AA00B54	SUB CONTRAST 50kQB
R319	ERD25TJ563	Carbon 56kQ 5% 0.25W
R321	EVND4AA00B14	SUB BRIGHT 10kQB
R322	ERD25TJ563	Carbon 56kQ 5% 0.25W
R324	ERD25TJ223	Carbon 22kQ 5% 0.25W
R327	ERD25TJ121	Carbon 120Q 5% 0.25W
R328	ERD25TJ332	Carbon 3.3kQ 5% 0.25W
R330	ERD25TJ103	Carbon 10kQ 5% 0.25W
R331	ERD25TJ103	Carbon 10kQ 5% 0.25W
R335	ERDS1TJ471	Carbon 470Q 5% 0.5W
R336	ERD25TJ473	Carbon 47kQ 5% 0.25W
R337	ERD25TJ683	Carbon 68kQ 5% 0.25W
R338	ERD25TJ102	Carbon 1kQ 5% 0.25W
R342	ERD25TJ101	Carbon 100Q 5% 0.25W
R343	ERD25TJ152	Carbon 1.5kQ 5% 0.25W
R344	ERD25TJ104	Carbon 100kQ 5% 0.25W
R345	ERO25CKF3001	Metal 3.00kQ 1% 0.25W <span>△</span>
R346	ERO25CKF3001	Metal 3.00kQ 1% 0.25W <span>△</span>
R349	ERD25TJ683	Carbon 68kQ 5% 0.25W
R351	ERG2ANJ103	Metal 10k 5% 2W <span>△</span>
R352	ERG2ANJ103	Metal 10k 5% 2W <span>△</span>
R353	ERG2ANJ103	Metal 10k 5% 2W <span>△</span>
R354	ERD25TJ181	Carbon 180Q 5% 0.25W
R355	ERD25TJ271	Carbon 270Q 5% 0.25W
R356	ERD25TJ181	Carbon 180Q 5% 0.25W
R357	EVN65UA00B22	G-DRIVE 200QB
R358	EVN65UA00B22	R-DRIVE 200QB
R359	ERD25TJ471	Carbon 470Q 5% 0.25W
R360	ERD25TJ471	Carbon 470Q 5% 0.25W
R361	ERD25TJ471	Carbon 470Q 5% 0.25W
R362	EVN65UA00B53	G-CUTOFF 5kQB
R363	EVN65UA00B53	B-CUTOFF 5kQB
R364	EVN65UA00B53	R-CUTOFF 5kQB
R365	ERDS1TJ152	Carbon 1.5kQ 5% 0.5W
R366	ERDS1TJ152	Carbon 1.5kQ 5% 0.5W
R367	ERDS1TJ152	Carbon 1.5kQ 5% 0.5W
R374	ERD25TJ274	Carbon 270kQ 5% 0.25W
R375	ERD25TJ393	Carbon 39kQ 5% 0.25W
R390	ERDS1TJ124	Carbon 120kQ 5% 0.5W
R391	ERD25TJ103	Carbon 10kQ 5% 0.25W
R392	ERD25TJ561	Carbon 560Q 5% 0.25W
R393	ERD25TJ561	Carbon 560Q 5% 0.25W
R394	ERD25TJ561	Carbon 560Q 5% 0.25W
R402	ERD25TJ102	Carbon 1kQ 5% 0.25W
R403	ERD25TJ184	Carbon 180kQ 5% 0.25W
R404	ERD25TJ274	Carbon 270kQ 5% 0.25W
R405	EVND4AA00B25	V. HEIGHT 200kQB
R406	ERD25TJ564	Carbon 560kQ 5% 0.25W
R407	ERD25TJ222	Carbon 2.2kQ 5% 0.25W
R408	ERD25TJ102	Carbon 1kQ 5% 0.25W
R409	ERD25TJ393	Carbon 39kQ 5% 0.25W
R410	ERD25TJ822	Carbon 8.2kQ 5% 0.25W
R423	ERD25TJ684	Carbon 680kQ 5% 0.25W
R452	ERD25TJ182	Carbon 1.8kQ 5% 0.25W
R453	ERD25TJ332	Carbon 3.3kQ 5% 0.25W
R454	ERD25TJ392	Carbon 3.9kQ 5% 0.25W
R458	ERD25TJ822	Carbon 8.2kQ 5% 0.25W
R459	ERD25TJ363	Carbon 36kQ 5% 0.25W
R461	ERD25TJ1R0	Carbon 1Q 5% 0.25W
R462	ERDS1TJ1R8	Carbon 1.8Q 5% 0.5W
R463	ERD25TJ223	Carbon 22kQ 5% 0.25W
R464	ERD25TJ561	Carbon 560Q 5% 0.25W
R469	ERD25TJ471	Carbon 470Q 5% 0.25W
R470	ERG2SJ391	Metal 390 5% 2W <span>△</span>

Ref. No.	Part No.	Description
R474	ERDS1TJ471	Carbon 470Q 5% 0.5W
R475	ERDS1TJ152	Carbon 1.5kQ 5% 0.5W
R476	ERD25TJ473	Carbon 47kQ 5% 0.25W
R477	ERD25TJ562	Carbon 5.6kQ 5% 0.25W
R478	ERD25TJ1R5	Carbon 1.5Q 5% 0.25W
R479	ERD25TJ1R0	Carbon 1Q 5% 0.25W
R484	TSF19801	Fusible Link <span>△</span>
R502	EVND4AA00B14	H. HOLD 10kQB
R503	ERO25CKF3002	Metal 30.0kQ 1% 0.25W <span>△</span>
R505	ERD25TJ563	Carbon 56kQ 5% 0.25W
R506	ERD25TJ682	Carbon 6.8kQ 5% 0.25W
R507	EVND4AA00B54	H. CENTRE 50kQB
R508	ERD25TJ683	Carbon 68kQ 5% 0.25W
R511	ERD25TJ682	Carbon 6.8kQ 5% 0.25W
R512	ERD25TJ820	Carbon 82Q 5% 0.25W
R513	ERD25TJ102	Carbon 1kQ 5% 0.25W
R514	ERD25TJ562	Carbon 5.6kQ 5% 0.25W
R515	ERD25TJ471	Carbon 470Q 5% 0.25W
R518	ERD25TJ391	Carbon 390Q 5% 0.25W
R519	ERD25TJ562	Carbon 5.6kQ 5% 0.25W
R520	ERD25TJ153	Carbon 15kQ 5% 0.25W
R521	ERD25TJ102	Carbon 1kQ 5% 0.25W
R522	ERD25TJ473	Carbon 47kQ 5% 0.25W
R523	ERD25TJ102	Carbon 1kQ 5% 0.25W
R527	ERO25CKF8201	Metal 8.20kQ 1% 0.25W <span>△</span>
R528	ERO25CKF3901	Metal 3.90kQ 1% 0.25W <span>△</span>
R529	ERD25TJ101	Carbon 100Q 5% 0.25W
R531	ERD25TJ222	Carbon 2.2kQ 5% 0.25W
R532	ERD25TJ562	Carbon 5.6kQ 5% 0.25W
R533	ERG2ANJ391	Metal 390 5% 2W <span>△</span>
R534	ERD25TJ333	Carbon 33kQ 5% 0.25W
R535	ERD25TJ392	Carbon 3.9kQ 5% 0.25W
R536	ERD25TJ103	Carbon 10kQ 5% 0.25W
R537	ERD25TJ562	Carbon 5.6kQ 5% 0.25W
R538	ERD25TJ472	Carbon 4.7kQ 5% 0.25W
R542	ERD25TJ474	Carbon 470kQ 5% 0.25W
R543	ERD25TJ103	Carbon 10kQ 5% 0.25W
R545	ERD25TJ103	Carbon 10kQ 5% 0.25W
R547	ERD25TJ474	Carbon 470kQ 5% 0.25W
R551	ERF7ZJ100	Wound 10Q 10% 7W <span>△</span>
R554	ERQ14AJ151	Film 150Q 5% 0.25W <span>△</span>
R557	ERQ12HKR33	Film 0.33Q 10% 0.5W <span>△</span>
R561	ERD25TJ153	Carbon 15kQ 5% 0.25W
R562	ERD25TJ124	Carbon 120kQ 5% 0.25W for TC-28A1F
	ERD25TJ134	Carbon 120kQ 5% 0.25W for TC-24A1F
R565	ERQ1CJP102	Film 1kQ 5% 1W <span>△</span>
R567	TSF19102	Fusible Link <span>△</span>
R568	ERD25TJ274	Carbon 270kQ 5% 0.25W
R570	ERD25TJ332	Carbon 3.3kQ 5% 0.25W
R571	ERD25TJ472	Carbon 4.7kQ 5% 0.25W
R572	ERD25TJ683	Carbon 68kQ 5% 0.25W
R604	ERD25TJ183	Carbon 18kQ 5% 0.25W
R606	EVND4AA00B14	SUB COLOUR 10kQB
R607	ERD25TJ103	Carbon 10kQ 5% 0.25W
R608	ERD25TJ181	Carbon 180Q 5% 0.25W
R609	EVND4AA00B22	SECAM R-Y REF. 200QB
R610	ERD25TJ391	Carbon 390Q 5% 0.25W
R611	ERD25TJ122	Carbon 1.2kQ 5% 0.25W
R612	ERD25TJ512	Carbon 5.1kQ 5% 0.25W
R615	ERD25TJ122	Carbon 1.2kQ 5% 0.25W
R616	ERD25TJ101	Carbon 100Q 5% 0.25W
R617	ERD25TJ101	Carbon 100Q 5% 0.25W
R618	ERD25TJ101	Carbon 100Q 5% 0.25W
R619	ERD25TJ562	Carbon 5.6kQ 5% 0.25W
R620	ERD25TJ101	Carbon 100Q 5% 0.25W
R622	ERD25TJ471	Carbon 470Q 5% 0.25W
R623	ERD25TJ681	Carbon 680Q 5% 0.25W
R624	ERD25TJ152	Carbon 1.5kQ 5% 0.25W
R625	ERD25TJ153	Carbon 15kQ 5% 0.25W
R626	ERD25TJ822	Carbon 8.2kQ 5% 0.25W



Ref. No.	Part No.	Description
R627	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R628	ERD25TJ681	Carbon 680Ω 5% 0.25W
R631	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R632	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R633	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R634	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R635	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R636	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R639	ERD25TJ105	Carbon 1MΩ 5% 0.25W
R651	ERD25TJ470	Carbon 47Ω 5% 0.25W
R652	ERD25TJ470	Carbon 47Ω 5% 0.25W
R653	ERD25TJ122	Carbon 1.2kΩ 5% 0.25W
R654	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R655	ERD25TJ822	Carbon 8.2kΩ 5% 0.25W
R656	ERQ14AJ4R7	Film 4.7Ω 5% 0.25W <span>△</span>
R657	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R658	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R660	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R674	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R675	ERD25TJ101	Carbon 100Ω 5% 0.25W
R676	ERD25TJ274	Carbon 270kΩ 5% 0.25W
R677	ERD25TJ393	Carbon 39kΩ 5% 0.25W
R678	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R679	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R680	ERD25TJ154	Carbon 150kΩ 5% 0.25W
R681	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R682	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R683	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R684	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R685	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R686	ERD25TJ101	Carbon 100Ω 5% 0.25W
R687	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R688	ERD25TJ821	Carbon 820Ω 5% 0.25W
R689	ERD25TJ331	Carbon 330Ω 5% 0.25W
R690	ERD25TJ681	Carbon 680Ω 5% 0.25W
R691	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R692	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R693	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R751	ERO25CKF1803	Metal 180kΩ 1% 0.25W <span>△</span>
R752	ERO25CKF1502	Metal 15.0kΩ 1% 0.25W <span>△</span>
R753	ERD25TJ303	Carbon 30kΩ 5% 0.25W for TC-24A1F
	ERD25TJ333	Carbon 33kΩ 5% 0.25W for TC-28A1F
R754	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R756	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R757	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R758	EVND4AA00B24	PARABOLA 20kΩB
R759	EVND4AA00B53	WIDTH 5kΩB
R760	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R761	ERD25TJ183	Carbon 18kΩ 5% 0.25W
R762	ERD25TJ683	Carbon 68kΩ 5% 0.25W
R764	ERD25TJ274	Carbon 270kΩ 5% 0.25W
R766	ERD25TJ272	Carbon 2.7kΩ 5% 0.25W
R767	ERG1ANJ471	Metal 470Ω 5% 1W <span>△</span>
R768	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R769	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R770	ERQ12HJ220	Film 22Ω 5% 0.5W <span>△</span>
R771	ERD25TJ684	Carbon 680kΩ 5% 0.25W
R774	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R802	ERF7ZK4R7	Wound 4.7Ω 10% 7W
R803	ERDS1TJ564	Carbon 560kΩ 5% 0.5W
R810	ERQ1CJP3R3	Film 3.3Ω 5% 1W <span>△</span>
R811	ERW12PKR27	Wound 0.27Ω 5% 0.5W <span>△</span>
R812	ERG2ANJ470	Metal 47Ω 5% 2W <span>△</span>
R813	ERG1ANJ683	Metal 68kΩ 5% 1W <span>△</span>
R814	ERD75TAJ825	Carbon 8.2MΩ 5% 0.75W <span>△</span>
R815	ERQ12HJ5R6	Film 5.6Ω 5% 0.5W <span>△</span>
R816	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R817	ERDS1TJ473	Carbon 47kΩ 5% 0.5W
R818	ERD25TJ124	Carbon 120kΩ 5% 0.25W
R820	ERDS1TJ393	Carbon 39kΩ 5% 0.5W

Ref. No.	Part No.	Description
R821	ERDS1TJ393	Carbon 39kΩ 5% 0.5W
R822	ERDS1TJ473	Carbon 47kΩ 5% 0.5W
R851	ERQ12HJ1R2	Film 1.2Ω 5% 0.5W <span>△</span>
R852	ERQ2CKPR47	Film 0.47Ω 10% 2W <span>△</span>
R854	ERQ2CKPR33	Film 0.33Ω 10% 2W <span>△</span>
R855	ERG3SJ180	Metal 18Ω 5% 3W <span>△</span>
R1101	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R1102	ERD25TJ100	Carbon 10Ω 5% 0.25W
R1103	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1104	ERD25TJ101	Carbon 100Ω 5% 0.25W
R1105	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R1201	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1202	ERD25TJ221	Carbon 220Ω 5% 0.25W
R1203	ERD25TJ221	Carbon 220Ω 5% 0.25W
R1204	ERD25TJ101	Carbon 100Ω 5% 0.25W
R1205	ERD25TJ101	Carbon 100Ω 5% 0.25W
R1207	ERD25TJ221	Carbon 220Ω 5% 0.25W
R1209	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R1210	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R1211	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R1212	ERDS1TJ221	Carbon 220Ω 5% 0.5W
R1213	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1214	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1215	ERG2ANJ680	Metal 68Ω 5% 2W <span>△</span>
R1217	ERD25TJ271	Carbon 270Ω 5% 0.25W
R1219	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R1221	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1222	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1223	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1224	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1225	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1226	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1227	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1229	ERD25TJ471	Carbon 470Ω 5% 0.25W
R1233	ERD25TJ105	Carbon 1MΩ 5% 0.25W
R1234	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1235	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1236	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R1237	ERDS1TJ121	Carbon 120Ω 5% 0.5W
R1238	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R1239	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1240	ERD25TJ221	Carbon 220Ω 5% 0.25W
R1241	ERD25TJ221	Carbon 220Ω 5% 0.25W
R1251	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1252	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1253	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1254	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1255	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1256	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1257	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1258	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1259	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1261	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1262	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1263	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1264	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1265	ERD25TJ391	Carbon 390Ω 5% 0.25W
R1266	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R1267	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R1270	ERD25TJ563	Carbon 56kΩ 5% 0.25W
R1271	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R1272	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1273	ERD25TJ331	Carbon 330Ω 5% 0.25W
R1274	ERD25TJ331	Carbon 330Ω 5% 0.25W
R1276	ERD25TJ221	Carbon 220Ω 5% 0.25W
R1277	ERD25TJ331	Carbon 330Ω 5% 0.25W
R1278	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R1281	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1283	TSF19631	Fusible Link <span>△</span>
R1285	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R1286	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R1287	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W

Ref. No.	Part No.	Description
R1289	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R1290	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R1291	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R1295	ERD25TJ331	Carbon 330Ω 5% 0.25W
R1310	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R1311	ERD25TJ393	Carbon 39kΩ 5% 0.25W
R1312	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1313	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R1314	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R1315	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1316	ERD25TJ101	Carbon 100Ω 5% 0.25W
R1317	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R1322	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2101	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2102	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2103	ERD25TJ824	Carbon 820kΩ 5% 0.25W
R2104	ERD25TJ183	Carbon 18kΩ 5% 0.25W
R2105	ERD25TJ561	Carbon 560Ω 5% 0.25W
R2106	ERD25TJ184	Carbon 180kΩ 5% 0.25W
R2110	ERD25TJ821	Carbon 820Ω 5% 0.25W
R2111	ERD25TJ470	Carbon 47Ω 5% 0.25W
R2112	ERQ14AJ330	Film 33Ω 5% 0.25W ▲
R2113	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2114	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2115	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R2117	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2118	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2119	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2121	ERD25TJ681	Carbon 680Ω 5% 0.25W
R2122	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R2123	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R2126	ERD25TJ470	Carbon 47Ω 5% 0.25W
R2128	ERD25TJ331	Carbon 330Ω 5% 0.25W
R2134	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2136	ERD25TJ272	Carbon 2.7kΩ 5% 0.25W
R2137	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2138	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2140	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R2141	ERD25TJ392	Carbon 3.9kΩ 5% 0.25W
R2146	ERD25TJ682	Carbon 6.8kΩ 5% 0.25W
R2147	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2148	ERD25TJ331	Carbon 330Ω 5% 0.25W
R2149	ERD25TJ470	Carbon 47Ω 5% 0.25W
R2151	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2152	ERD25TJ122	Carbon 1.2kΩ 5% 0.25W
R2153	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R2154	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2155	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2156	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R2157	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2158	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R2159	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R2160	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2161	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2162	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2163	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R2164	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2165	ERD25TJ181	Carbon 180Ω 5% 0.25W
R2166	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R2167	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2168	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2169	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2201	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2202	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R2203	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2204	ERD25TJ273	Carbon 27kΩ 5% 0.25W
R2205	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2206	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2207	ERD25TJ563	Carbon 56kΩ 5% 0.25W
R2208	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2209	EVND4AA00B52	STEREO ADJ. 500ΩB
R2210	EVND4AA00B32	BILINGUAL ADJ. 300ΩB

Ref. No.	Part No.	Description
R2211	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2212	ERD25TJ398	Carbon 39kΩ 5% 0.25W
R2213	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2214	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2215	ERD25TJ824	Carbon 820kΩ 5% 0.25W
R2220	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2221	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2224	EVND4AA00B54	SAPARATION 50kΩB
R2225	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2226	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2227	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2228	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2230	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2231	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R2232	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R2235	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2236	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2237	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2240	ERQ14AJ330	Film 33Ω 5% 0.25W ▲
R2241	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2243	ERD25TJ271	Carbon 270Ω 5% 0.25W
R2247	ERD25TJ271	Carbon 270Ω 5% 0.25W
R2256	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2257	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2258	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2259	ERD25TJ473	Carbon 47kΩ 5% 0.25W
R2260	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R2261	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2262	ERQ14AJ100	Film 10Ω 5% 0.25W ▲
R2263	ERD25TJ682	Carbon 6.8kΩ 5% 0.25W
R2264	ERQ12HJ470	Film 47Ω 5% 0.5W ▲
R2265	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2266	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R2268	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2269	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2270	ERD25TJ563	Carbon 56kΩ 5% 0.25W
R2271	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2272	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2273	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2301	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2305	ERD25TJ183	Carbon 18kΩ 5% 0.25W
R2306	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2307	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2308	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2310	ERD25TJ123	Carbon 12kΩ 5% 0.25W
R2312	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2313	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2314	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2315	ERD25TJ123	Carbon 12kΩ 5% 0.25W
R2316	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2317	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2318	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2319	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2320	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2321	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2324	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2351	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2352	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2353	ERD25TJ151	Carbon 150Ω 5% 0.25W
R2354	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2354	ERD25TJ151	Carbon 150Ω 5% 0.25W
R2355	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2356	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2357	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2358	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2359	ERQ14AJ4R7	Film 4.7Ω 5% 0.25W ▲
R2360	ERQ14AJ4R7	Film 4.7Ω 5% 0.25W ▲
R2361	ERD25TJ274	Carbon 270kΩ 5% 0.25W
R2362	ERD25TJ913	Carbon 91kΩ 5% 0.25W
R2363	ERQ14AJ101	Film 100Ω 5% 0.25W ▲
R2364	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W
R2365	ERD25TJ332	Carbon 3.3kΩ 5% 0.25W

Ref. No.	Part No.	Description
R2366	ERF10ZK4R7	Wound 4.7Ω 10% 10W
R2367	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2368	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R2369	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2370	ERD25TJ222	Carbon 2.2kΩ 5% 0.25W
R2401	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2402	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2403	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2408	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2418	ERD25TJ823	Carbon 82kΩ 5% 0.25W
R2419	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2420	ERD25TJ823	Carbon 82kΩ 5% 0.25W
R2421	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2422	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2423	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2424	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2425	ERD25TJ823	Carbon 82kΩ 5% 0.25W
R2426	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2427	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2428	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2429	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2430	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2431	ERD25TJ823	Carbon 82kΩ 5% 0.25W
R2432	ERD25TJ823	Carbon 82kΩ 5% 0.25W
R2433	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2434	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2435	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2436	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2437	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2438	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2439	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2440	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2441	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2442	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2443	ERD25TJ563	Carbon 56kΩ 5% 0.25W
R2444	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2446	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2447	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2448	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2449	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2450	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2451	ERD25TJ823	Carbon 82kΩ 5% 0.25W
R2452	ERQ12HJ4R7	Film 4.7Ω 5% 0.5W
R2453	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2454	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2456	ERD25TJ393	Carbon 39kΩ 5% 0.25W
R2457	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2458	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2459	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2460	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2461	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2462	ERD25TJ562	Carbon 5.6kΩ 5% 0.25W
R2463	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2464	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2465	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2466	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2467	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2468	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2469	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2470	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2471	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2472	ERD25TJ474	Carbon 470kΩ 5% 0.25W
R2477	ERD25TJ224	Carbon 220kΩ 5% 0.25W
R2478	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2479	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2480	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2481	ERD2FCG100P	RESISTOR 10Ω
R2482	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2483	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2484	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2485	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2486	ERD25TJ103	Carbon 10kΩ 5% 0.25W

Ref. No.	Part No.	Description
R2487	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2488	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2489	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2490	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2491	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2492	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2493	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2494	ERD25TJ680	Carbon 68Ω 5% 0.25W
R2495	ERD25TJ153	Carbon 15kΩ 5% 0.25W
R2602	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2603	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2604	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2605	ERD25TJ104	Carbon 100kΩ 5% 0.25W
R2606	ERD25TJ221	Carbon 220Ω 5% 0.25W
R2608	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2610	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2612	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2613	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2614	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2620	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2621	ERD25TJ750	Carbon 75Ω 5% 0.25W
R2623	ERD25TJ681	Carbon 680Ω 5% 0.25W
R2625	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2627	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2628	ERD25TJ103	Carbon 10kΩ 5% 0.25W
R2629	ERD25TJ391	Carbon 390Ω 5% 0.25W
R2631	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2632	ERD25TJ680	Carbon 68Ω 5% 0.25W
R2633	ERD25TJ472	Carbon 4.7kΩ 5% 0.25W
R2634	ERQ12HJ8R2	Film 8.2Ω 5% 0.5W
R2635	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2636	ERD25TJ102	Carbon 1kΩ 5% 0.25W
R2638	ERDS1TJ222	Carbon 2.2kΩ 5% 0.5W
R2640	ERD25TJ471	Carbon 470Ω 5% 0.25W
R2641	ERD25TJ333	Carbon 33kΩ 5% 0.25W
R2660	ERD25TJ152	Carbon 1.5kΩ 5% 0.25W
R2661	ERD25TJ101	Carbon 100Ω 5% 0.25W
R2662	ERD25TJ152	Carbon 1.5kΩ 5% 0.25W
R2663	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2664	ERD25TJ223	Carbon 22kΩ 5% 0.25W
R2665	ERD25TJ182	Carbon 1.8kΩ 5% 0.25W
R2666	ERD25TJ684	Carbon 680kΩ 5% 0.25W
R2667	ERD25TJ103	Carbon 10kΩ 5% 0.25W
<b>CAPACITORS</b>		
C11	ECEA50Z1	Electrolytic 1μF 50V
C12	ECEA1CU100	Electrolytic 10μF 16V
C13	ECKC1H103J	Ceramic 10nF 50V
C14	ECEA1CU330	Electrolytic 33μF 16V
C15	ECEA50Z1	Electrolytic 1μF 50V
C26	ECEA1HU010	Electrolytic 1μF 50V
C27	ECKC1H103J	Ceramic 10nF 50V
C28	ECKC1H103J	Ceramic 10nF 50V
C29	ECEA16Z10	Electrolytic 10μF 16V
C30	ECKC1H103J	Ceramic 10nF 50V
C31	ECKC1H103J	Ceramic 10nF 50V
C70	ECEA1HU010	Electrolytic 1μF 50V
C71	ECEA1HU100	Electrolytic 10μF 50V
C104	ECCR1H050J	Ceramic 5pF 50V
C105	ECKC1H103J	Ceramic 10nF 50V
C106	ECKC1H103J	Ceramic 10nF 50V
C108	ECEA50Z2R2	Capacitor 2.2μF 50V
C109	ECCR1H150J	Ceramic 15pF 50V
C110	ECKC1H103J	Ceramic 10nF 50V
C111	ECEA1CU102	Electrolytic 1000μF 16V
C112	ECKC1H103J	Ceramic 10nF 50V
C113	ECCR1H220J	Ceramic 22pF 50V
C114	ECKC1H103J	Ceramic 10nF 50V
C115	ECKC1H103J	Ceramic 10nF 50V
C116	ECEA1EN4R7	Electrolytic 4.7μF 25V
C117	ECKC1H102J	Ceramic 1nF 50V
C118	ECRHA007A11	Trimmer Capacitor 7pF
C119	ECCR1H120J	Ceramic 12pF 50V



Ref. No.	Part No.	Description
C120	ECQM1H333JZ	Plastic FILM 33nF 50V
C121	ECRHA007A11	Trimmer Capacitor 7pF
C122	ECEA50ZR47	Electrolytic 0.47μF 50V
C124	ECKC1H103J	Ceramic 10nF 50V
C125	ECKC1H103J	Ceramic 10nF 50V
C126	ECKC1H103J	Ceramic 10nF 50V
C127	ECQM1H153JZ	Plastic FILM 15nF 50V
C128	ECEA1HN010	Electrolytic 1μF 50V
C129	ECEA1CU470	Electrolytic 47μF 16V
C130	ECEA1HUR47	Electrolytic 0.47μF 50V
C131	ECKC1H561J	Ceramic 560pF 50V
C133	ECEA50ZR1	Electrolytic 0.1μF 50V
C142	ECEA1HN2R2	Electrolytic 2.2μF 50V
C143	ECCR1H080C	Ceramic 8pF 50V
C171	ECQM1H472JZ	Plastic Film 4.7nF 50V
C172	ECCR1H330J	Ceramic 33pF 50V
C175	ECQV1H105JZ	Plastic Film 1μF 50V
C176	ECKC1H103J	Ceramic 10nF 50V
C177	ECEA1AU220	Electrolytic 22μF 10V
C179	ECQV1H474JZ	Plastic Film 470nF 50V
C184	ECEA1HU010	Electrolytic 1μF 50V
C186	ECCR1H181J	Ceramic 180pF 50V
C187	ECKC1H271J	Ceramic 270pF 50V
C209	ECEA1CU100	Electrolytic 10μF 16V
C210	ECEA50ZR22	Electrolytic 0.22μF 50V
C211	ECEA1CU220	Electrolytic 22μF 16V
C212	ECKC1H103J	Ceramic 10nF 50V
C213	ECKC1H103J	Ceramic 10nF 50V
C214	ECEA1EU4R7	Electrolytic 4.7μF 25V
C216	ECEA50ZR22	Electrolytic 0.22μF 50V
C217	ECEA1CU222	Electrolytic 2200μF 16V
C218	ECEA1CU101	Electrolytic 100μF 16V
C219	ECEA1EU4R7	Electrolytic 4.7μF 25V
C301	ECKC1H103J	Ceramic 10nF 50V
C302	ECQM1H153J	Plastic Film 15nF 50V
C308	ECQV1H104JZ	Plastic Film 100nF 50V
C309	ECEA1HU100	Electrolytic 10μF 50V
C311	ECEA1HUR47	Electrolytic 0.47μF 50V
C312	ECQV1H334JZ	Plastic Film 330nF 50V
C313	ECQV1H334JZ	Plastic Film 330nF 50V
C314	ECQV1H334JZ	Plastic Film 330nF 50V
C323	ECCR1H470J	Ceramic 47pF 50V
C327	ECCR1H820J	Ceramic 82pF 50V
C328	ECKC1H103J	Ceramic 10nF 50V
C351	ECCR1H271J	Ceramic 270pF 50V
C352	ECCR1H331J	Ceramic 330pF 50V
C353	ECCR1H271J	Ceramic 270pF 50V
C355	ECKC3D152J	Ceramic 1.5nF 2kV
C357	ECKC2H152J	Ceramic 1.5nF 500V
C358	ECEA1HU220	Electrolytic 22μF 50V
C368	ECEA2ES010	Electrolytic 1μF 250V
C371	ECEA1EU470	Electrolytic 47μF 25V
C375	ECEA1HU100	Electrolytic 10μF 50V
C376	ECCR1H470J	Ceramic 47pF 50V
C377	ECCR1H470J	Ceramic 47pF 50V
C378	ECCR1H470J	Ceramic 47pF 50V
C401	ECQV1H334JZ	Plastic Film 330nF 50V
C402	ECQV1H334JZ	Plastic Film 330nF 50V
C403	ECKC1H103J	Ceramic 10nF 50V
C452	ECKC2H332J	Ceramic 3.3nF 500V
C453	ECQM1H333JZ	Plastic Film 33nF 50V
C455	ECEA1HGE101	Electrolytic 100μF 50V
C456	ECEA1VGE222	Electrolytic 2200μF 35V
C457	ECQV1H334JZ	Plastic Film 330nF 50V
C458	ECEA1VU332	Electrolytic 3300μF 35V
C459	ECQV1H104JZ	Plastic Film 100nF 50V
C462	ECQM1H223JZ	Plastic Film 22nF 50V
C465	ECQV1H474JZ	Plastic Film 470nF 50V
C466	ECEA25Z4R7	Electrolytic 4.7μF 25V
C501	ECQV1H104JZ	Plastic Film 100nF 50V
C502	ECQP1152GZ	Plastic Film 1.5nF 100V
C503	ECQV1H104JZ	Plastic Film 100nF 50V

Ref. No.	Part No.	Description
C504	ECEA1CU102	Electrolytic 1000μF 16V
C505	ECKC1H101J	Ceramic 100pF 50V
C506	ECEA1HU220	Electrolytic 22μF 50V
C507	ECEA1HU010	Electrolytic 1μF 50V
C510	ECQM1H682J	Plastic Film 6.8nF 50V
C515	ECQM1H122J	Plastic Film 1.2nF 50V
C517	ECQV1H154JZ	Plastic Film 150nF 50V
C518	ECEA1CU100	Electrolytic 10μF 16V
C519	ECEA1CU330	Electrolytic 33μF 16V
C520	ECEA1VU4R7	Electrolytic 4.7μF 35V
C522	ECEA1CN100	Electrolytic 10μF 16V
C525	ECEA1CU470	Electrolytic 47μF 16V
C531	ECQM1103KZ	Plastic Film 10nF 100V
C541	ECEA1HU2R2	Electrolytic 2.2μF 50V
C542	ECEA1JU100	Electrolytic 10μF 63V
C543	ECEA1CU100	Electrolytic 10μF 16V
C551	ECEA2VG010	Electrolytic 1μF 350V
C552	ECWF2H824J	Polypropylene 820nF 200V
C553	ECEA2CS4R7	Electrolytic 4.7μF 160V
C554	ECEA2ES100	Electrolytic 10μF 250V
C555	ECKC2H471J	Ceramic 470pF 500V
C556	ECKC3F102J	Ceramic 1nF 3kV
C558	ECWH12H822J	Metalized 8.2nF 1.2kV
C560	ECWF2H334J	Polypropylene 330nF 200V
C561	ECKC3D561J	Ceramic 560pF 2kV
C602	ECQM1H223JZ	Plastic Film 22nF 50V
C603	ECQM1H223JZ	Plastic Film 22nF 50V
C604	ECQM1H223JZ	Plastic Film 22nF 50V
C606	ECCR1H680J	Ceramic 68pF 50V
C607	ECEA1HU010	Electrolytic 1μF 50V
C608	ECCR1H121J	Ceramic 120pF 50V
C609	ECCR1H220J	Ceramic 22pF 50V
C610	ECCR1H220J	Ceramic 22pF 50V
C611	ECCR1H221J	Ceramic 220pF 50V
C612	ECKC1H103J	Ceramic 10nF 50V
C613	ECKC1H103J	Ceramic 10nF 50V
C615	ECQV1H334JZ	Plastic Film 330nF 50V
C617	ECCR1H680J	Ceramic 68pF 50V
C618	ECCR1H221J	Ceramic 220pF 50V
C619	ECCR1H121J	Ceramic 120pF 50V
C620	ECKC1H222J	Ceramic 2.2nF 50V
C621	ECQM1H473JZ	Plastic Film 47nF 50V
C622	ECQV1H334JZ	Plastic Film 330nF 50V
C623	ECQV1H334JZ	Plastic Film 330nF 50V
C624	ECQV1H334JZ	Plastic Film 330nF 50V
C626	ECKC1H103J	Ceramic 10nF 50V
C627	ECEA1CU221	Electrolytic 220μF 16V
C629	ECQM1H223JZ	Plastic Film 22nF 50V
C630	ECKC1H102J	Ceramic 1nF 50V
C631	ECCR1H220J	Ceramic 22pF 50V
C632	ECCR1H121J	Ceramic 120pF 50V
C634	ECCR1H391J	Ceramic 390pF 50V
C635	ECKC1H472J	Ceramic 4.7nF 50V
C636	ECKC1H472J	Ceramic 4.7nF 50V
C637	ECRHA030E11	Trimmer Capacitor 30pF
C638	ECEA1HU010	Electrolytic 1μF 50V
C639	ECQM1H223JZ	Plastic Film 22nF 50V
C642	ECKC1H103J	Ceramic 10nF 50V
C651	ECEA1HUR33	Electrolytic 0.33μF 50V
C652	ECEA1HUR33	Electrolytic 0.33μF 50V
C653	ECCR1H101J	Ceramic 100pF 50V
C654	ECCR1H101J	Ceramic 100pF 50V
C655	ECKC1H331J	Ceramic 330pF 50V
C656	ECKC1H471J	Ceramic 470pF 50V
C657	ECQM1H223JZ	Plastic Film 22nF 50V
C658	ECQM1H223JZ	Plastic Film 22nF 50V
C659	ECKC1H471J	Ceramic 470pF 50V
C661	ECEA1CN220	Electrolytic 22μF 16V
C662	ECKC1H332J	Ceramic 3.3nF 50V
C663	ECEA1EU470	Electrolytic 47μF 25V
C664	ECKC1H101J	Ceramic 100pF 50V
C665	ECKC1H101J	Ceramic 100pF 50V



Ref. No.	Part No.	Description
C681	ECEA1HN010	Electrolytic 1 $\mu$ F 50V
C682	ECCR1H220J	Ceramic 22pF 50V
C683	ECCR1H101J	Ceramic 100pF 50V
C684	ECQV1H105JZ	Plastic Film 1 $\mu$ F 50V
C685	ECEA1EN3R3	Electrolytic 3.3 $\mu$ F 25V
C751	ECQV1H104JZ	Plastic Film 100nF 50V
C752	ECQV1H104JZ	Plastic Film 100nF 50V
C753	ECQM10223JZ	Plastic Film 22nF 1kV $\Delta$
C754	ECCR1H181J	Ceramic 180pF 50V
C755	ECEA1VU470	Electrolytic 47 $\mu$ F 35V
C756	ECEA1EU221	Electrolytic 220 $\mu$ F 25V
C758	ECQM1225KNB	Plastic Film 2.2 $\mu$ F 100V $\Delta$
C760	ECEA1EN4R7	Electrolytic 4.7 $\mu$ F 25V
C801	222233040473	Capacitor 0.047 $\mu$ F $\Delta$
C802	222233040473	Capacitor 0.047 $\mu$ F $\Delta$
C803	ECKC2H472J	Ceramic 4.7nF 500V
C804	ECKC2H472J	Ceramic 4.7nF 500V
C805	ECKC2H472J	Ceramic 4.7nF 500V
C806	ECKC2H472J	Ceramic 4.7nF 500V
C807	ECOS2GA221CA	Capacitor 220 $\mu$ F 400V
C808	ECEA1HFS100	Electrolytic 10 $\mu$ F 50V
C809	ECQV1H334JZ	Plastic Film 330nF 50V
C810	ECKC2H103J	Ceramic 10nF 500V
C811	ECKC3A821J	Ceramic 820pF 1kV
C812	ECKC3A471J	Ceramic 470pF 1kV
C813	ECKCNS332J	Ceramic 3.3nF 4kV $\Delta$
C815	ECKC2H471J	Ceramic 470pF 500V
C816	ECQM6473KZ	Plastic Film 47nF 600V
C817	ECKC1H471J	Ceramic 470pF 50V
C820	ECKC3A102J	Ceramic 1nF 1kV
C831	ECKCNS471J	Capacitor 470pF $\Delta$
C851	ECKC3A152J	Ceramic 1.5nF 1kV
C852	ECKC2H681J	Ceramic 680pF 500V
C853	ECKC2H561J	Ceramic 560pF 500V
C854	ECEA2EG101	Electrolytic 100 $\mu$ F 250V
C855	ECEA1VGE101	Electrolytic 100 $\mu$ F 35V
C856	ECEA1VGE471	Electrolytic 470 $\mu$ F 35V
C857	ECKC2H471J	Ceramic 470pF 500V
C858	ECEA1EGE102	Electrolytic 1000 $\mu$ F 25V
C859	ECEA1EGE100	Electrolytic 10 $\mu$ F 25V
C860	ECKC1H103J	Ceramic 10nF 50V
C861	ECEA1CGE101	Electrolytic 100 $\mu$ F 16V
C863	ECQV1H105JZ	Plastic Film 1 $\mu$ F 50V
C1101	ECEA16210	Electrolytic 10 $\mu$ F 16V
C1102	ECEA1CU100	Electrolytic 10 $\mu$ F 16V
C1103	ECEA1CU100	Electrolytic 10 $\mu$ F 16V
C1104	ECQM1H392JC	Plastic Film 3.9nF 50V
C1105	ECQM1H333J	Plastic Film 33nF 50V
C1106	ECQP1392JZ	Plastic 3.9nF 100V
C1107	ECEA0JU101	Electrolytic 100 $\mu$ F 6.3V
C1201	ECKC1H103J	Ceramic 10nF 50V
C1202	ECQM1H272JZ	Plastic Film 2.7nF 50V
C1203	ECEA0JU101	Electrolytic 100 $\mu$ F 6.3V
C1204	ECQM1H333JZ	Plastic Film 33nF 50V
C1205	ECKC1H103J	Ceramic 10nF 50V
	ECQV1H104JZ	Plastic Film 100nF 50V on E-BOARD
C1206	ECEA1CGE102	Electrolytic 1000 $\mu$ F 16V
C1207	ECCR1H150J	Ceramic 15pF 50V
C1208	ECCR1H270J	Ceramic 27pF 50V
C1212	ECKC1H103J	Ceramic 10nF 50V
C1213	ECKC1H103J	Ceramic 10nF 50V
C1214	ECEA0JGE221	Electrolytic 220 $\mu$ F 6.3V
C1221	ECKC1H103J	Ceramic 10nF 50V
C1222	ECEA1HU010	Electrolytic 1 $\mu$ F 50V
C1223	ECQM1H563J	Plastic Film 56nF 50V
C1226	ECKC1H103J	Ceramic 10nF 50V
C1227	ECQV1H104JZ	Plastic Film 100nF 50V
C1310	ECEA1CU100	Electrolytic 10 $\mu$ F 16V
C1311	ECEA1CU101	Electrolytic 100 $\mu$ F 16V
C1313	ECEA1CU100	Electrolytic 10 $\mu$ F 16V

Ref. No.	Part No.	Description
C1314	ECEA1HU2R2	Electrolytic 2.2 $\mu$ F 50V
C2101	ECKC1H103J	Ceramic 10nF 50V
C2102	ECKC1H103J	Ceramic 10nF 50V
C2104	ECQM1H472JZ	Plastic Film 4.7nF 50V
C2105	ECQM1H472JZ	Plastic Film 4.7nF 50V
C2106	ECEA1CU100	Electrolytic 10 $\mu$ F 16V
C2107	ECKC1H103J	Ceramic 10nF 50V
C2108	ECEA50ZR47	Electrolytic 0.47 $\mu$ F 50V
C2109	ECQM1H103KZ	Plastic Film 10nF 50V
C2110	ECEA1HU010	Electrolytic 1 $\mu$ F 50V
C2111	ECQM1H103KZ	Plastic Film 10nF 50V
C2112	ECEA1CU330	Electrolytic 33 $\mu$ F 16V
C2113	ECKC1H103J	Ceramic 10nF 50V
C2114	ECEA1HUR47	Electrolytic 0.47 $\mu$ F 50V
C2115	ECCR1H150J	Ceramic 15pF 50V
C2116	ECKC1H103J	Ceramic 10nF 50V
C2117	ECKC1H102J	Ceramic 1nF 50V
C2120	ECQM1H103KZ	Plastic Film 10nF 50V
C2122	ECQM1H103KZ	Plastic Film 10nF 50V
C2123	ECCR1H331J	Ceramic 330pF 50V
C2125	ECCR1H561J	Ceramic 560pF 50V
C2126	ECQM1H393J	Plastic Film 39nF 50V
C2127	ECCR1H470J	Ceramic 47pF 50V
C2128	ECKC1H103J	Ceramic 10nF 50V
C2129	ECEA1CU330	Electrolytic 33 $\mu$ F 16V
C2130	ECKC1H103J	Ceramic 10nF 50V
C2132	ECKC1H103J	Ceramic 10nF 50V
C2134	ECKC1H103J	Ceramic 10nF 50V
C2140	ECKC1H103J	Ceramic 10nF 50V
C2141	ECCR1H090J	Ceramic 9pF 50V
C2142	ECCR1H151J	Ceramic 150pF 50V
C2149	ECCR1H100J	Ceramic 10pF 50V
C2150	ECKC1H103J	Ceramic 10nF 50V
C2151	ECKC1H103J	Ceramic 10nF 50V
C2152	ECKC1H103J	Ceramic 10nF 50V
C2153	ECEA1CU220	Electrolytic 22 $\mu$ F 16V
C2154	ECKC1H103J	Ceramic 10nF 50V
C2155	ECKC1H103J	Ceramic 10nF 50V
C2156	ECEA1CU221	Electrolytic 220 $\mu$ F 16V
C2157	ECEA1HNR47	Electrolytic 0.47 $\mu$ F 50V
C2158	ECKC1H103J	Ceramic 10nF 50V
C2159	ECEA1CU101	Electrolytic 100 $\mu$ F 16V
C2160	ECEA1CU221	Electrolytic 220 $\mu$ F 16V
C2161	ECEA1CU100	Electrolytic 10 $\mu$ F 16V
C2162	ECKC1H103J	Ceramic 10nF 50V
C2163	ECRHA020E11	Trimmer Capacitor 20pF
C2164	ECCR1H180J	Ceramic 18pF 50V
C2165	ECKC1H103J	Ceramic 10nF 50V
C2166	ECQM1H472JZ	Plastic Film 4.7nF 50V
C2167	ECQM1H472JZ	Plastic Film 4.7nF 50V
C2168	ECKC1H103J	Ceramic 10nF 50V
C2169	ECKC1H103J	Ceramic 10nF 50V
C2170	ECKC1H103J	Ceramic 10nF 50V
C2201	ECQM1H102KZ	Plastic Film 1nF 50V
C2202	ECQM1H822J	Plastic Film 8.2nF 50V
C2203	ECQM1H273J	Plastic Film 27nF 50V
C2204	ECQM1H102KZ	Plastic Film 1nF 50V
C2205	ECEA1CU100	Electrolytic 10 $\mu$ F 16V
C2206	ECEA50ZR47	Electrolytic 0.47 $\mu$ F 50V
C2207	ECQV1H224JZ	Plastic Film 220nF 50V
C2208	ECQV1H104JZ	Plastic Film 100nF 50V
C2209	ECQV1H224JZ	Plastic Film 220nF 50V
C2210	ECQV1H224JZ	Plastic Film 220nF 50V
C2211	ECQV1H104JZ	Plastic Film 100nF 50V
C2212	ECKC1H103J	Ceramic 10nF 50V
C2213	ECEA1CU101	Electrolytic 100 $\mu$ F 16V
C2216	ECEA1EN4R7	Electrolytic 4.7 $\mu$ F 25V
C2217	ECEA1EN4R7	Electrolytic 4.7 $\mu$ F 25V
C2218	ECQM1H473JZ	Plastic Film 47nF 50V
C2219	ECEA1CN470	Electrolytic 47 $\mu$ F 16V
C2220	ECQV4H474JZ	Plastic Film 470nF 50V
C2221	ECQP1562JZ	Plastic 5.6nF 100V

Ref. No.	Part No.	Description
C2222	ECQM1H223JZ	Plastic Film 22nF 50V
C2223	ECEA1CU101	Electrolytic 100μF 16V
C2224	ECCR1H120J	Ceramic 12pF 50V
C2225	ECQM1H102KZ	Plastic Film 1nF 50V
C2226	ECQV1H104JZ	Plastic Film 100nF 50V
C2227	ECEA1CN470	Electrolytic 47μF 16V
C2231	ECEA1EN3R3	Electrolytic 3.3μF 25V
C2232	ECEA1CN470	Electrolytic 47μF 16V
C2237	ECKC1H103J	Ceramic 10nF 50V
C2238	ECEA1HU010	Electrolytic 1μF 50V
C2239	ECKC1H103J	Ceramic 10nF 50V
C2240	ECEA1HU010	Electrolytic 1μF 50V
C2241	ECEA1HN010	Electrolytic 1μF 50V
C2242	ECEA1HN010	Electrolytic 1μF 50V
C2246	ECEA1CN470	Electrolytic 47μF 16V
C2247	ECEA1CU101	Electrolytic 100μF 16V
C2248	ECEA1CU101	Electrolytic 100μF 16V
C2252	ECKC1H103J	Ceramic 10nF 50V
C2303	ECEA1CU101	Electrolytic 100μF 16V
C2304	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2305	ECQM1H392JC	Plastic Film 3.9nF 50V
C2306	ECEA1CU470	Electrolytic 47μF 16V
C2307	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2308	ECQM1H103KZ	Plastic Film 10nF 50V
C2309	ECQV1H224JZ	Plastic Film 220nF 50V
C2310	ECQM1H103KZ	Plastic Film 10nF 50V
C2311	ECEA1CU471	Electrolytic 470μF 16V
C2321	ECQM1H392JC	Plastic Film 3.9nF 50V
C2322	ECEA1CN100	Electrolytic 10μF 16V
C2326	ECQV1H124JZ	Plastic Film 120nF 50V
C2327	ECQM1H103KZ	Plastic Film 10nF 50V
C2328	ECEA1CN100	Electrolytic 10μF 16V
C2351	ECQM1H183J	Plastic Film 18nF 50V
C2352	ECQM1H183J	Plastic Film 18nF 50V
C2353	ECEA1HGNR47	Electrolytic 0.47μF 50V
C2354	ECEA1HGNR47	Electrolytic 0.47μF 50V
C2355	ECEA1EGE221	Electrolytic 220μF 25V
C2356	ECEA1EGE221	Electrolytic 220μF 25V
C2357	ECEA1VGE470	Electrolytic 47μF 35V
C2358	ECEA1VGE470	Electrolytic 47μF 35V
C2359	ECQV1H104JZ	Plastic Film 100nF 50V
C2360	ECQV1H104JZ	Plastic Film 100nF 50V
C2361	ECEA1HGE102	Electrolytic 1000μF 50V
C2362	ECEA1HGE102	Electrolytic 1000μF 50V
C2363	ECEA1HGE010	Electrolytic 1μF 50V
C2364	ECEA1VGE470	Electrolytic 47μF 35V
C2365	ECEA1HGE101	Electrolytic 100μF 50V
C2366	ECQM1H823J	Plastic Film 82nF 50V
C2367	ECQM1H823J	Plastic Film 82nF 50V
C2368	ECES1HU472	Electrolytic 4700μF 50V
C2369	ECEA1HGE102	Electrolytic 1000μF 50V
C2370	ECQM1H273J	Plastic Film 27nF 50V
C2371	ECQM1H273J	Plastic Film 27nF 50V
C2372	ECQM1H472JZ	Plastic Film 4.7nF 50V
C2373	ECQM1H472JZ	Plastic Film 4.7nF 50V
C2401	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2410	ECEA1CN100	Electrolytic 10μF 16V
C2411	ECEA1HN4R7	Electrolytic 4.7μF 50V
C2412	ECEA1CU101	Electrolytic 100μF 16V
C2413	ECEA1CU470	Electrolytic 47μF 16V
C2414	ECEA1CU470	Electrolytic 47μF 16V
C2415	ECEA1HN010	Electrolytic 1μF 50V
C2416	ECEA1HN010	Electrolytic 1μF 50V
C2417	ECEA1CN100	Electrolytic 10μF 16V
C2418	ECEA1HN010	Electrolytic 1μF 50V
C2419	ECEA1HN010	Electrolytic 1μF 50V
C2423	ECEA1CU101	Electrolytic 100μF 16V
C2424	ECKC1H103J	Ceramic 10nF 50V
C2425	ECEA1CU471	Electrolytic 470μF 16V
C2426	ECEA1HN010	Electrolytic 1μF 50V
C2427	ECEA1HN010	Electrolytic 1μF 50V
C2428	ECEA1CN100	Electrolytic 10μF 16V

Ref. No.	Part No.	Description
C2429	ECEA1CN100	Electrolytic 10μF 16V
C2430	ECEA1CU100	Electrolytic 10μF 16V
C2431	ECQV1H104JZ	Plastic Film 100nF 50V
C2432	ECEA1CU221	Electrolytic 220μF 16V
C2433	ECEA1CN100	Electrolytic 10μF 16V
C2434	ECEA1HN010	Electrolytic 1μF 50V
C2435	ECEA1HN010	Electrolytic 1μF 50V
C2437	ECEA1HN010	Electrolytic 1μF 50V
C2438	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2439	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2441	ECCR1H101J	Ceramic 100pF 50V
C2442	ECCR1H101J	Ceramic 100pF 50V
C2444	ECEA1CU470	Electrolytic 47μF 16V
C2445	ECEA1HN010	Electrolytic 1μF 50V
C2446	ECEA1HN010	Electrolytic 1μF 50V
C2447	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2448	ECEA1HN010	Electrolytic 1μF 50V
C2449	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2450	ECEA1HN010	Electrolytic 1μF 50V
C2453	ECEA1CN100	Electrolytic 10μF 16V
C2456	ECEA1CN100	Electrolytic 10μF 16V
C2461	ECEA1HU2R2	Electrolytic 2.2μF 50V
C2462	ECQV1H104JZ	Plastic Film 100nF 50V
C2463	ECEA1CU101	Electrolytic 100μF 16V
C2464	ECKC1H103J	Ceramic 10nF 50V
C2601	ECKC1H103J	Ceramic 10nF 50V
C2602	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2603	ECEA1CN100	Electrolytic 10μF 16V
C2606	ECEA1CU471	Electrolytic 470μF 16V
C2607	ECEA1CU100	Electrolytic 10μF 16V
C2608	ECQV1H104JZ	Plastic Film 100nF 50V
C2609	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2610	ECEA1CU470	Electrolytic 47μF 16V
C2611	ECEA1CU470	Electrolytic 47μF 16V
C2612	ECEA1CN100	Electrolytic 10μF 16V
C2613	ECEA1CU471	Electrolytic 470μF 16V
C2614	ECKC1H271J	Ceramic 270pF 50V
C2619	ECKC1H471J	Ceramic 470pF 50V
C2627	ECEA1EN4R7	Electrolytic 4.7μF 25V
C2628	ECEA1CU100	Electrolytic 10μF 16V
C2629	ECEA1CN220	Electrolytic 22μF 16V
<b>COILS</b>		
L12	TLT082L991R	COIL 8.2μH
L16	TLT082L991R	COIL 8.2μH
L17	TLT082L991R	COIL 8.2μH
L18	TLT082L991R	COIL 8.2μH
L101	TLT015K991R	COIL 1.5μH
L103	TLTR33L991R	COIL 0.33μH
L104	TLT120K991R	COIL
L105	EIV7EN027B	COIL
L107	EIV1EG040B	TRANSFORMER
L109	TLT560K991R	COIL
L120	TLT082L991R	COIL 8.2μH
L121	TLT100K991R	COIL 10μH
L171	TLT082L991R	COIL 8.2μH
L174	TLTR33K991R	COIL 0.33μH
L175	TSC937	CHOKE
L303	TLT100K991R	COIL 10μH
L351	TLT181K991R	COIL 180μH
L352	TLT181K991R	COIL 180μH
L353	TLT181K991R	COIL 180μH
L355	TSC937	CHOKE
L356	TSC937	CHOKE
L357	TSC937	CHOKE
L451	TLT082L991R	COIL 8.2μH
L552	ELC08D055	COIL
L553	ELH5L403	COIL
L554	ELC12B004	COIL
L555	TSC937	CHOKE
L602	TLT100J991R	COIL 10μH
L603	TLK158066	COIL
L605	EIK7EG013B	COIL

Ref. No.	Part No.	Description
L606	EIK7EG013B	COIL
L607	EIK7EG012B	COIL
L609	EIK7EG011B	COIL
L681	TLT220K991R	COIL 22 $\mu$ H
L682	TLT390K991R	COIL 39 $\mu$ H
L752	ELC10D006	COIL
L801	ELF18D650L	LINE FILTER $\Delta$
L802	TLP15574E	LINE FILTER $\Delta$
L803	TSC925-4	CHOKE
L804	TSC925-4	CHOKE
L806	TSC925-4	CHOKE
L807	TLQ056K236B	COIL 5.6 $\mu$ H
L808	TLT101K991R	COIL 100 $\mu$ H
L812	TLP15574E	LINE FILTER $\Delta$
L852	TSC937	CHOKE
L853	TLT030L119C	COIL 3 $\mu$ H
L855	TSC925-4	CHOKE
L857	TSC925-4	CHOKE
L1101	TLT542K991K	COIL 5.4mH
L1102	EIR7QG001B	COIL
L1201	TLQ082K236B	COIL 8.2 $\mu$ H
L1202	TLQ082K236B	COIL 8.2 $\mu$ H
L2101	EIV7EN036B	TRANSFORMER
L2104	EIS7EN009B	TRANSFORMER
L2105	EIS7EN009B	TRANSFORMER
L2106	TLI157754X	COIL
L2113	TLT120K991R	COIL 12 $\mu$ H
L2151	EIV7EN029B	COIL
L2152	TLT150K991R	COIL 15 $\mu$ H
L2153	TLT150K991R	COIL 15 $\mu$ H
L2201	EIR7QG017B	COIL
L2202	TLT102K991R	COIL 1mH
L2203	EIS7EG015B	COIL
L2205	TSC925-4	CHOKE
L2232	TLT392J993R	COIL 3.9mH
L2301	TLT100K991R	COIL 10 $\mu$ H
LC601	TLK153162E	COIL
LC2230	ELB5A074	L-C TRAP
DL301	TLK160860E	COIL
DL601	SDL145D	DELAY LINE
<b>TRANSFORMERS</b>		
T101	EIV1EG041B	TRANSFORMER
T531	ETH19Y53AY	TRANSFORMER
T551	TLF15542F	FBT $\Delta$
T801	ETS49K422A	TRANSFORMER $\Delta$
T1201	ETP35KE65E	TRANSFORMER $\Delta$
<b>DIODES</b>		
D102	MA858TA5	DIODE
D103	MA858TA5	DIODE
D171	MA4082	DIODE
D174	MA165TA5	DIODE
D177	MA150TA	DIODE
D179	MA4047H	ZENER DIODE
D181	MA4082	ZENER DIODE
D182	MA4082	ZENER DIODE
D201	MA165TA5	DIODE
D202	MA165TA5	DIODE
D203	MA165TA5	DIODE
D204	MA165TA5	DIODE
D205	MA165TA5	DIODE
D206	MA165TA5	DIODE
D303	MA165TA5	DIODE
D305	MA4130	ZENER DIODE
D306	MA4130	ZENER DIODE
D307	MA4130	ZENER DIODE
D313	MA27TA5	DIODE
D314	MA4033M	ZENER DIODE
D319	MA165TA5	DIODE
D320	MA165TA5	DIODE
D321	MA165TA5	DIODE
D328	MA4056H	ZENER DIODE
D329	MA1033MTA	ZENER DIODE

Ref. No.	Part No.	Description
D330	MA858TA5	DIODE
D403	MA27TA5	DIODE
D451	ERA15-02V3	DIODE
D452	MA165TA5	DIODE
D453	MA165TA5	DIODE
D501	ERA15-02V3	DIODE
D505	MA165TA5	DIODE
D508	MA4051M	ZENER DIODE
D510	MA165TA5	DIODE
D541	MA4360M	ZENER DIODE
D551	ERA22-02V3	DIODE
D552	MA167TA5	DIODE
D603	MA4056H	ZENER DIODE
D604	MA858TA5	DIODE
D671	MA858TA5	DIODE
D753	ERB08-15	DIODE
D754	TVSRU2AM	DIODE
D755	MA4200M	ZENER DIODE
D757	MA165TA5	DIODE
D758	MA165TA5	DIODE
D801	D4SB80Z	RECTIFIER
D804	ERZC10DK621	VARISTOR
D805	232266296009	POSISTOR
D807	ERA22-04V3	DIODE
D809	ERA22-02V3	DIODE
D810	ERA22-08V3	DIODE
D811	ON3105.TV	PHOTO ISOLATOR $\Delta$
D812	MA150TA	DIODE
D851	TVSC2408M	DIODE
D852	EU02	DIODE
D853	ERD32-02L7	DIODE
D854	TVSSR2KL	ZENER DIODE
D855	ERD32-02L7	DIODE
D1101	PN323B-LFHT	PHOTO DIODE
D1205	MA165TA5	DIODE
D1206	MA165TA5	DIODE
D1207	MA165TA5	DIODE
D1208	TVSS1WBS10	RECTIFIER
D1217	MA165TA5	DIODE
D1220	MA165TA5	DIODE
D1221	MA4082H	ZENER DIODE
D1225	MA4082	ZENER DIODE
D1228	MA4082	ZENER DIODE
D1229	MA4082	ZENER DIODE
D1231	MA165TA5	DIODE
D1232	MA165TA5	DIODE
D1244	MA165TA5	DIODE
D1251	LN81RPHL	L.E.D.
D1253	LN526GALT	L.E.D. (7 SEGMENT)
D1255	LN063183P6	L.E.D. BLOCK
D1267	MA4082	ZENER DIODE
D1268	MA4082	ZENER DIODE
D1310	MA4091M	ZENER DIODE
D1311	MA165TA5	DIODE
D1312	MA165TA5	DIODE
D1313	MA4091M	ZENER DIODE
D1315	MA700TA5	DIODE
D2151	MA858TA5	DIODE
D2152	MA858TA5	DIODE
D2153	MA858TA5	DIODE
D2162	MA4051	ZENER DIODE
D2201	MA700TA5	DIODE
D2202	MA165TA5	DIODE
D2203	MA165TA5	DIODE
D2204	MA700TA5	DIODE
D2205	MA165TA5	DIODE
D2207	MA165TA5	DIODE
D2209	MA165TA5	DIODE
D2211	MA165TA5	DIODE
D2215	MA700TA5	DIODE
D2216	MA700TA5	DIODE
D2304	MA165TA5	DIODE

Ref. No.	Part No.	Description
D2351	TVSRD13FB	ZENER DIODE
D2401	MA165TA5	DIODE
D2402	MA165TA5	DIODE
D2405	MA165TA5	DIODE
D2406	MA165TA5	DIODE
D2408	MA165TA5	DIODE
D2409	MA165TA5	DIODE
D2410	MA165TA5	DIODE
D2411	MA165TA5	DIODE
D2603	MA165TA5	DIODE
D2605	MA165TA5	DIODE
D2607	MA165TA5	DIODE
D2610	MA150TA	DIODE
D2612	MA165TA5	DIODE
D2614	MA165TA5	DIODE
D2615	MA700TA5	DIODE
D2628	MA858TA5	DIODE
D2629	MA165TA5	DIODE
<b>INTEGRATED CIRCUITS</b>		
IC70	UPC574J	REGULATOR
IC101	M51367SP	I.C.
IC171	SAB3035	CITAC I.C.
IC201	AN5836	AUDIO CONTROL I.C.
IC451	TDA3654	VERTICAL OUT I.C.
IC501	TDA2579A	SYNC CIRCUIT I.C.
IC601	TDA4555	I.C.
IC602	TDA3505	I.C.
IC651	TDA4565	I.C.
IC801	STR54041-M	REGULATOR
IC851	L78M12MRB	12V REGULATOR
IC1101	UPC1474HA	I.R. RECEIVER I.C.
IC1202	PCD8582	MEMORY I.C.
IC1203	MAB8461PW134	MICROPROCESSOR I.C.
IC1204	L78M05MRB	5V REGULATOR I.C.
IC1205	SAA1061	DISPLAY DRIVER I.C.
IC2101	AN5136K	I.C.
IC2102	AN5215	I.C.
IC2151	TDA2543	I.C.
IC2170	TC4011BP	I.C.
IC2201	TDA3803A	I.C.
IC2270	UPD4066BC	SWITCHING I.C.
IC2271	L78M12MRB	12V REGULATOR
IC2272	UPD4023BC	IC
IC2302	TDA3810	AMBIENCE CONTROL I.C.
IC2351	STK4392TV	IC
IC2401	M51321P	SWITCHING I.C.
IC2402	L78M12MRB	12V REGULATOR
IC2403	UPD4066BC	SWITCHING I.C.
IC2601	M51326P	SWITCHING I.C.
<b>TRANSISTORS</b>		
Q103	2SC2636-T	TRANSISTOR
Q104	UN4211TA	TRANSISTOR
Q105	2SC1685-TA	TRANSISTOR
Q201	UN4111TA	TRANSISTOR
Q202	UN4211TA	TRANSISTOR
Q304	2SC1685-TA	TRANSISTOR
Q306	UN4211TA	TRANSISTOR
Q351	2SC2923-RL	TRANSISTOR
Q352	2SC2923-RL	TRANSISTOR
Q353	2SC2923-RL	TRANSISTOR
Q365	2SC1685-TA	TRANSISTOR
Q366	2SC1685-TA	TRANSISTOR
Q367	2SC1685-TA	TRANSISTOR
Q401	2SC1685-TA	TRANSISTOR
Q501	2SD836ALB	TRANSISTOR
Q502	2SC1685-TA	TRANSISTOR
Q503	2SC1685-TA	TRANSISTOR
Q504	UN4213TA	TRANSISTOR
Q541	2SA564A	TRANSISTOR
Q542	2SC1685-TA	TRANSISTOR
Q551	2SD1441-RL	TRANSISTOR

Ref. No.	Part No.	Description
Q601	2SC1685-TA	TRANSISTOR
Q602	2SC1685-TA	TRANSISTOR
Q654	UN4213TA	TRANSISTOR
Q671	2SC1685-TA	TRANSISTOR
Q672	2SA719-TA	TRANSISTOR
Q673	2SD965-R	TRANSISTOR
Q674	2SA564A	TRANSISTOR
Q675	2SC1685-TA	TRANSISTOR
Q751	2SC1685-TA	TRANSISTOR
Q752	2SA564A	TRANSISTOR
Q753	2SD762-P	TRANSISTOR
Q801	2SD965-R	TRANSISTOR
Q802	2SD965-R	TRANSISTOR
Q1205	2SC1685-TA	TRANSISTOR
Q1207	UN4213TA	TRANSISTOR
Q1208	UN4215TA	TRANSISTOR
Q1209	2SC1685-TA	TRANSISTOR
Q1210	UN4215TA	TRANSISTOR
Q1211	UN4215TA	TRANSISTOR
Q1212	UN4211TA	TRANSISTOR
Q1217	UN411FTA	TRANSISTOR
Q1220	UN411FTA	TRANSISTOR
Q1225	UN4210TA	TRANSISTOR
Q1227	UN4112TA	TRANSISTOR
Q1228	UN411FTA	TRANSISTOR
Q1230	UN4215TA	TRANSISTOR
Q1232	2SA564A	TRANSISTOR
Q1235	2SC1685-TA	TRANSISTOR
Q1236	UN411FTA	TRANSISTOR
Q1310	2SA564A	TRANSISTOR
Q1311	2SC1685-TA	TRANSISTOR
Q1312	2SA564A	TRANSISTOR
Q1313	2SC1685-TA	TRANSISTOR
Q2101	BF370	TRANSISTOR
Q2103	2SC2636-T	TRANSISTOR
Q2110	2SC2636-T	TRANSISTOR
Q2111	2SA564A	TRANSISTOR
Q2151	UN4212TA	TRANSISTOR
Q2152	UN4212TA	TRANSISTOR
Q2160	UN4213TA	TRANSISTOR
Q2201	2SC1685-TA	TRANSISTOR
Q2207	UN4212TA	TRANSISTOR
Q2210	UN4211TA	TRANSISTOR
Q2401	UN4123TA	TRANSISTOR
Q2403	UN4211TA	TRANSISTOR
Q2404	UN4212TA	TRANSISTOR
Q2405	2SD637-RS	TRANSISTOR
Q2406	UN4212TA	TRANSISTOR
Q2407	UN4212TA	TRANSISTOR
Q2408	UN4112TA	TRANSISTOR
Q2409	UN4212TA	TRANSISTOR
Q2410	UN4212TA	TRANSISTOR
Q2413	2SC1318A	TRANSISTOR
Q2414	2SC1685-TA	TRANSISTOR
Q2415	2SC1685-TA	TRANSISTOR
Q2416	2SC1685-TA	TRANSISTOR
Q2417	2SC1685-TA	TRANSISTOR
Q2420	2SC1685-TA	TRANSISTOR
Q2421	2SC1685-TA	TRANSISTOR
Q2422	2SC1685-TA	TRANSISTOR
Q2423	2SC1685-TA	TRANSISTOR
Q2424	2SC1685-TA	TRANSISTOR
Q2426	2SC1685-TA	TRANSISTOR
Q2427	UN4212TA	TRANSISTOR
Q2428	2SC1685-TA	TRANSISTOR
Q2456	2SC1685-TA	TRANSISTOR
Q2601	2SD637-RS	TRANSISTOR
Q2602	2SD637-RS	TRANSISTOR
Q2604	2SA564A	TRANSISTOR
Q2605	2SD639	TRANSISTOR
Q2606	UN4211TA	TRANSISTOR
Q2608	UN4213TA	TRANSISTOR







# Manuel de Service

Supplement - 1

DATE : JANUARY, 1990.

Références des  
téléviseurs concernés.

**TC-24/28A1F**

**Châssis ALPHA-2W**

## Téléviseur Couleur

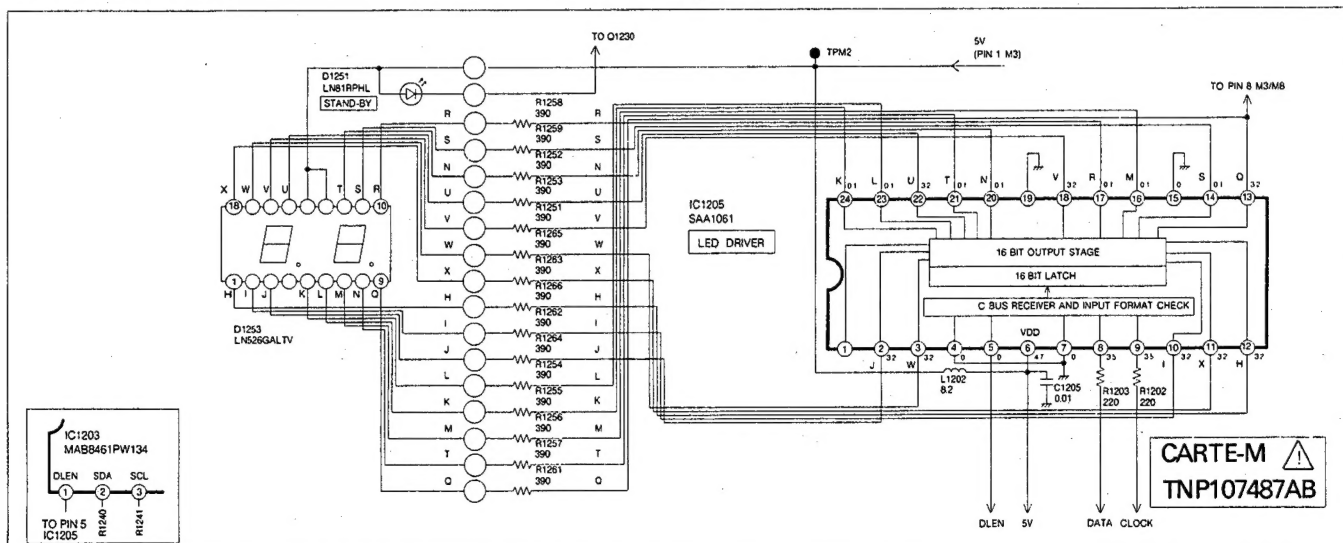
Utiliser ce supplement avec le manuel de dépannage des téléviseurs.

Objet : Changement de référence du LED et des haut - parleurs 'Dome'.

Cette modification est effective pour les modèles fabriqués à partir de Decembre.

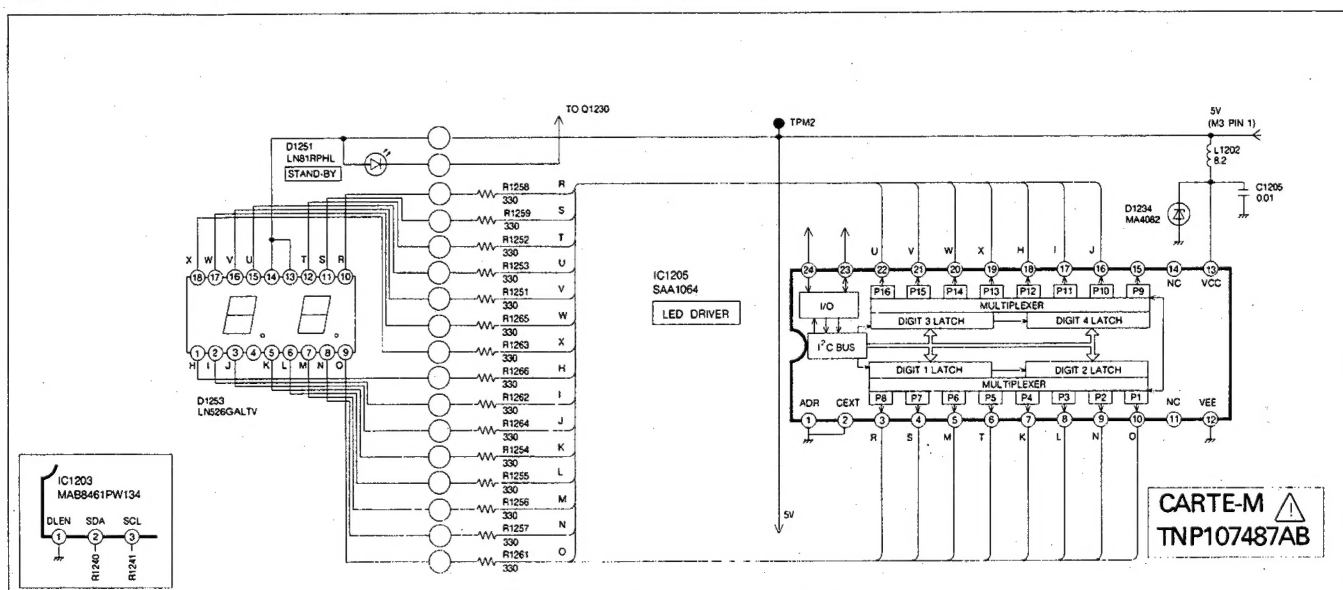
Pièce du circuit 'M'.

Avant changement .



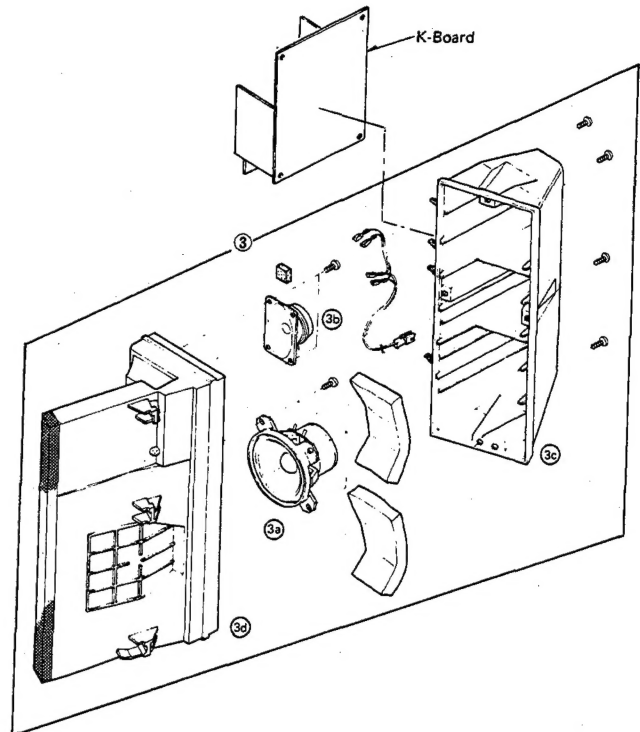
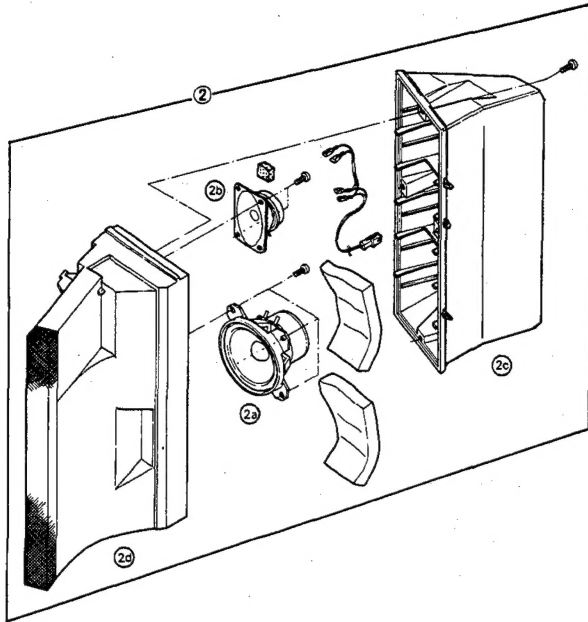
Pièce du circuit 'M'.

Après changement.





# EMPLACEMENT DES PIÈCES



Nota: Il existe deux références de haut - parleurs pour téléviseurs. Quand vous commandez un haut parleur, prière de commander la référence inscrite sur le haut - parleur que vous changez.

## LISTE DES PIÈCES DE RECHANGE

Ref No.	Original Part No.	Description	New Part No.	Description		
<b>MISCELLANEOUS COMPONENTS</b>						
2)	EAB1076LB	SPEAKER UNIT COMPLETE (L)				
or	EAB1064LF	SPEAKER UNIT COMPLETE (L)				
2a)	EAS10PL602A	BASS SPEAKER				
2b)	EAS7DH02D	TWEETER SPEAKER				
2c)	TZS9EH005	SPEAKER ENCLOSURE (BACK L)				
2d)	TZS9EH006	SPEAKER ENCLOSURE (FRONT L)				
3)	EAB1076RB	SPEAKER UNIT COMPLETE (R)				
or	EAB1064RFA	SPEAKER UNIT COMPLETE (R)				
3a)	EAS10PL602A	BASS SPEAKER				
3b)	EAS7DH02D	TWEETER SPEAKER				
3c)	TZS9EH007	SPEAKER ENCLOSURE (BACK R)				
3d)	TZS9EH008	SPEAKER ENCLOSURE (FRONT R)				
<b>DIODES</b>						
D1234	NONE		MA4082	DIODE		
<b>I.C.s</b>						
IC1205	SAA1061	DISPLAY DRIVER	SAA1064	DISPLAY DRIVER		
<b>RESISTORS</b>						
R1251	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1252	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1253	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1254	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1255	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1256	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1257	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1258	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1259	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1261	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1262	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1263	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1264	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1265	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω
R1266	ERD25TJ391	CARBON 0.25W 5%	390Ω	ERD25TJ331	CARBON 0.25W 5%	330Ω

# EMPLACEMENT DES PIÈCES

Remarque : Les numéros sur les pièces mécaniques indiquent les No. de réf. de la liste des pièces de rechange.

